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Hospital Library

The MODERN HOSPITAL

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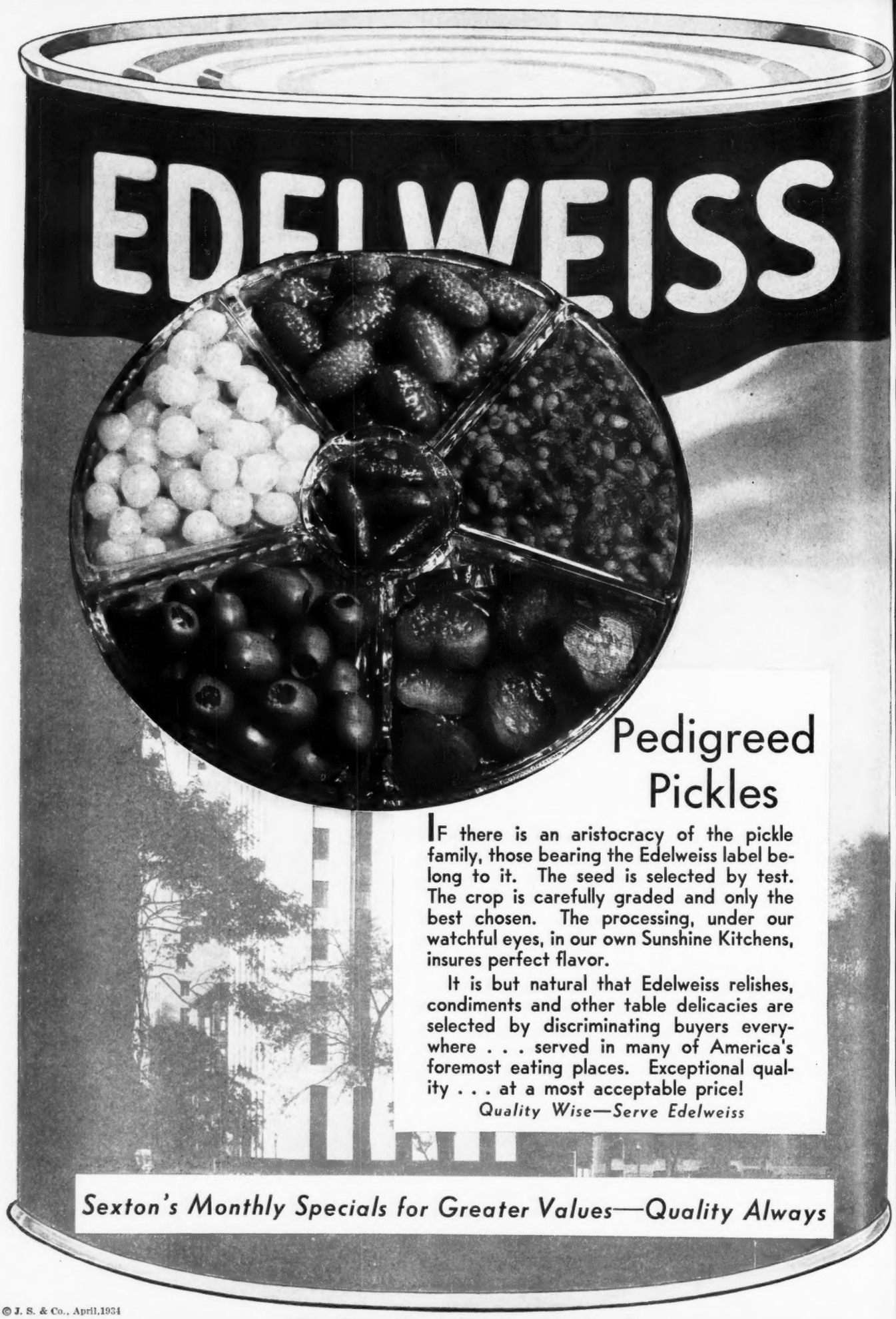

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THE MODERN HOSPITAL

A Monthly Journal Devoted to the Construction, Equipment, Administration and Maintenance of Hospitals and Sanatoriums

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What Is the Future of Nursing?

By HUGH CABOT, M.D.
Division of Surgery, The Mayo Clinic, Rochester, Minn.

Doctor Cabot believes that development of nursing service apart from medical service, hospital service, social service and various other services is not only futile but likely to be positively dangerous. He suggests three possible outlets from the nursing dilemma—control of production, creation of a market, or both

IN UNDERTAKING to discuss so difficult a problem as the future of nursing I should perhaps guard myself at the outset by certain qualifying statements. Obviously what one thinks of the future involves the operation of the doctrine of prediction, and there are perhaps few fields in which our scope has of late years been more severely contracted than that of prediction.

Social conditions are today less static than at any previous time in history and consequently assumptions based upon probable continuance of conditions with which we are familiar have become increasingly hazardous. On the other hand, there is no possibility of progress except by planning, which involves prediction, and I suspect we must chance it if we are to avoid chaos. This then must be my excuse for venturing into a dangerous field.

The other point upon which I want to forestall criticism concerns itself with the value of what we are pleased to call facts and their statistical use. Obviously one cannot make useful deductions without facts, but I think it equally obvious that the statistical compilations that we call facts are an unreliable basis for deductions, since, as an eminent philosopher has pointed out, "Facts, unfortunately, keep no better than fish." If we undertake to build plans upon compilations of statistics, we are, I think, almost certain to be wrong, because by the time we get these alleged facts, they are probably untrue. Our soundest plans are likely to be based not upon a slavish adherence to statistical compilations, but upon the use of such data to show tendencies, which tendencies, should, I believe, be interpreted in the light of past experience under somewhat similar conditions.

As a preliminary proposition I believe that the future of nursing cannot be estimated except as a part of the whole development which we may call health service. The development of nursing service

apart from medical service, hospital service, social service and various other services, is not only futile but is likely to be positively dangerous.

Nursing is still in an early stage of development as compared with many other fields of learning and education. It is only about fifty years since nursing education began in this country. Nursing is still importantly on an apprenticeship basis, and has not yet reached the level when it can be satisfactorily compared with many of the other fields of educational planning. The whole history of education shows that it began in private and personal ventures with intimate association between teacher and pupil, and with a much larger element of example than of precept. Gradually it has become more formalized, less personal—the latter probably to its disadvantage—and more and more has been taken over as a public enterprise.

Has Supply Exceeded Demand?

Nursing education is still in the more or less unformalized stage, apprenticeship still constitutes a large proportion of the curriculum, and it has not in general been placed upon a parity with other forms of education. The control of nursing schools by hospitals and to a varying extent the subordination of the educational process to the requirements of the institution, still operate to make nursing education an anomaly in our educational system.

Insofar as nursing education is intended to educate the pupil in the theory and practice of nursing, this relationship to the hospital still operates as a handicap. Moreover this relationship operates in other ways, particularly in relation to the size of the output. The output has increased at a literally staggering rate and has been influenced relatively little by the demand and relatively largely by the requirements of hospital care in the rapid growth of hospital service. Looked at from the economic viewpoint, production has apparently outrun demand, if we take as evidence of demand what people will pay for this service. The income of nurses in general is shockingly low, and this fact must roughly be interpreted as evidence that supply has exceeded apparent demand.

On the other hand, no one familiar with social conditions will be tempted to deny that an enormous number of persons are handicapped by illness whose recovery would be promoted, and in some instances perhaps whose lives would be saved, by nursing service which is not now available for them. The supply which has exceeded the demand is not for nursing service, but for the service of private practitioners of nursing. Something like half of the nurses graduated from training schools today enter the field of private nursing, thereby entering into merciless cutthroat competition, not only with their fellow workers but with a large number of other persons who have few or no qualifications for the work.

From this it appears to me to follow inevitably that there are two lines of thought that must attract our attention. One concerns itself with the supply of private duty nurses, and the other concerns itself with the possibility of supplying nursing care to the enormous number of persons who need it but under our present system cannot have it. One might perhaps risk the guess that something like 75 per cent of the sick who would be benefited by the service of a nurse cannot afford to employ one. Under present arrangements this is for them a luxury beyond their means.

On the other hand, only the thoughtless will suggest that the money now being paid for private duty nurses is in excess of that to which they are entitled. As a matter of fact, their experience and training certainly entitle them to more compensation than they receive at present. Thus we find ourselves in the same blind alley with many other economic difficulties. On the one hand we hear the cry of overproduction, but on the other there is ample evidence that the real difficulty lies in underconsumption. What we have been having of late years is practically unlimited production, but without a market. The market for the private duty nurse under the present system is glutted.

How to Control Production

From this dilemma there are obviously three possible outlets—(1) we may control production, (2) we may create a market or (3) we may do both. There is of course a further alternative—we may do none of these things and continue under the operation of the *laissez faire* doctrine until the job is taken over by someone else who is prepared to handle it. Now, we may properly regard ourselves as more or less qualified experts in this field. If we fail to face our problems, and they have to be taken over by somebody else, that somebody else will inevitably be representative of the public and certainly less well qualified than we are. We still have our "night to howl" and I suggest that we shall be well advised to take advantage of it.

One of the most obvious methods of controlling production is to put nursing education on an educational basis parallel with other educational establishments. This will of course require considerable divorce of the nursing school from the hospital and will at the same time require the raising of standards, so that nursing education becomes more complete than is possible under the present three-year curriculum subordinated to the necessities of hospital management. If we are to

put nursing education upon a sound educational basis, we shall have to link it up more closely with other departments of education. Much of the background of nursing cannot well be taught in a hospital atmosphere, and an integration between nursing schools and collegiate educational establishments seems clearly indicated.

Such a move will of course involve the abandonment by many hospitals of their nursing schools since for them a satisfactory educational establishment cannot be set up. This will at once operate to decrease the output. The abandonment of nursing schools by hospitals not equipped to play a satisfactory part in a thoroughly educational program will involve a large increase in the number of graduate nurses employed in hospital operation. This will in effect increase the market for graduate nurses and thereby operate to relieve the pressure. I am not overlooking the fact that it will have the effect of increasing hospital costs.

Medical Service Is Inadequate

Though I have already indicated that divorcement of nursing schools from hospitals would have some effect in increasing the market for graduate nurses, there are other and more important methods by which that can be done.

The most certain and satisfactory way of increasing the market is to increase what is now rather loosely referred to as public health and welfare nursing. The essential peculiarity of this field is that nurses thus employed are paid as a rule not by the individual but by the public. In this way a satisfactory amount of nursing service can be rendered at a cost to the community far below that involved in the practice of private duty nursing. If the demand for nursing by those in the lower income brackets is really to be met, we shall require a literally enormous increase in the number of nurses employed in these fields. This will involve extension and alteration of the present standard three-year nursing curriculum and will of course involve heavy expenditures.

Under present economic planning for medical service these expenses look large or even prohibitive. We have of late years heard too much of the cost of medical care and not enough of the requirements of proper medical service. I do not hesitate to state dogmatically that the present offerings of medical service, and under this term I include all persons associated with the provision of health service, fall enormously short of what any competent group of experts would hold to be satisfactory medical service. If we abandon the futile endeavor at cheeseparing of costs and address ourselves to the business of deciding what constitutes proper medical care, and, having determined this, set ourselves resolutely to obtain it, we stand some chance of reaching the goal.

The whole problem of medical care needs to be looked at from the point of view of service rendered and not of cost. It is undeniable that there are at present a large number of individuals, constituting at my guess something approaching 50 per cent of the population, who are not getting satisfactory medical care, not because it is unavailable, but because we have not set up the machinery to supply it. An important part of this whole problem of supplying satisfactory medical care will be found to lie in the provision of sufficient public health and welfare nursing to stop the innumerable gaps between the knowledge and the application of medical service.

I am unwilling to leave this subject without paying my respects to the disagreements that have occurred between the practitioners of medicine and the practitioners of nursing. These keep cropping up and go back to the confusing question of what constitutes the practice of medicine. In the haphazard growth of legislation concerning the practice of medicine, we have set up certain definitions that constitute barriers. These barriers were properly intended to protect the people against the practice of medicine by unqualified persons. On the other hand, they were not intended to handicap the administration of proper medical care by persons who do not pretend to be doctors of medicine.

The line between the practice of medicine and the practice of nursing tends to become fixed by statutory provisions. These provisions were as a rule made to fit circumstances that have disappeared beyond recall. The properly qualified nurse of today is doing many things that even twenty-five years ago were quite within the practice of medicine and quite without the practice of nursing. The complications of medical practice have increased enormously and the relationship between the physician and the nurse is, or should be, that of junior and senior associates and not that of superior and subordinate.

Public Interest Must Be Protected

In the proper carrying out of public health and welfare nursing, this line between the practice of nursing and the practice of medicine, if drawn by statutory definitions of medical practice, will, in my opinion, seriously collide with the public interest. That properly qualified graduate nurses should do many things that come clearly within the definition of the practice of medicine seems to me clear. That they should do these things under the supervision of physicians seems equally clear.[1]

[1]Read before the Central Council for Nursing Education at the Thirtieth Annual Congress on Medical Education, Licensure, and Hospitals, Chicago, Feb. 13, 1934.

What Others Are Doing

Hospital Designs an Effective Perpetual Inventory System

The inventory record of individual items in stock rooms used at Grant Hospital, Columbus, Ohio, was designed to fit the hospital's individual needs, according to Dr. M. F. Steele, superintendent.

The record form is a card 4⅝ by 10¾ inches, ruled on both sides, with a top visibility for the name and short description of the individual item. Each card has also a space for the department name as well as for the stock room number.

Charges are made to the inventory from the invoice of the creditor at the time of crediting accounts payable. On the inventory card are inserted date of invoice, purchase order number and quantity received. If the card shows some of the same merchandise on hand, the quantity received is added to that already in stock. Next is inserted the price of each unit of measure, such as $5 a dozen, 12½ cents a yard, 38 cents a pint, and the total value of this item on hand is extended into a total column. Next to this value is a space to insert the creditor's name.

When a requisition is issued for a piece of merchandise, the department name is stated on the requisition. Each person in charge of a stock room knows which room contains this merchandise. Only the quantity issued is stated on the requisition until it is filled and returned to the office where inventory records are kept. Here the requisition is credited to the card for this item in a column headed "Quantity Given Out." The price of the unit of measure is applied at this time to the balance of inventory on hand and the value is extended to the total value column. This places the work in proper position for subtracting the value remaining on hand from the value in inventory before the requisition was filled. The difference is the expense portion applicable to the requisition being entered and this expense is extended in a column provided for it.

A number of requisitions may be issued each day representing various departments and supplies must be taken from more than one stock room. After the items filled from a requisition are figured and deducted from inventory cards, the requisition is summarized and placed to the credit of the departmental inventory and stock room and at the same time charged to proper expense accounts. This summary is all that reaches the credit side of the inventory record in the general ledger.

Two books are involved in keeping the inventory. The binder holds 700 cards or loose leaves. The other book is a columnar one in which requisitions are summarized and charges distributed. This book also contains an internal check or control to prove the accuracy of the inventory work two ways—by being able to prove the charges to inventory through credits to accounts payable.

Stock room values are totaled at the end of each month by extending on each card the remaining value in money to a column provided for statement purposes, with the date, as "September 30—$4.90." Thus it is possible to tell how much value each inventory item represents in the total inventory figure stated in the balance sheet.

Branch Library Supplies Books for Patients, Nurses and Employees

With the cooperation of the librarian of the New Bedford Free Public Library a branch library was established in 1925 at St. Luke's Hospital, New Bedford, Mass., writes Scott Whitcher, superintendent. The hospital purchased at small expense a book wagon designed by the American Library Association, and a start was made with magazines and old but popular books. A member of the library force, chosen for her personality, cheerfulness and ability to adapt herself to surroundings and conditions, visits the hospital on Tuesdays and Fridays.

Only the public wards were covered at first but in 1926 new books purchased by the library were placed in the hospital branch and the service was extended to all patients, nurses and employees. From time to time books have been purchased purposely for the hospital and today the institution has about a thousand volumes. The books consist mostly of popular fiction, mystery and detective stories, Western thrillers, sea and sport stories, humorous works and the not-too-serious problem novels and best sellers. Nonfiction works consist of modern biographies and entertaining books of travel and essays. Technical and instructive books are borrowed from the central library.

The library technique is simple. Each book is charged to the patient, under date, by name and ward. The patient is allowed to choose as many books as he thinks he may need until the librarian's next visit and to keep them as long as he is in the hospital if necessary. Some patients will read one book in three weeks while others will read three books in two days. Because patients change constantly it is difficult to keep accurate account of the books, but from available statistics the circulation has grown from 6,138 books in 1926 to double that number in 1932.

Unique First Bill for Hospital Patients

A sugar-coated bill is presented each patient or his sponsor upon admission to the Conemaugh Valley Memorial Hospital, Johnstown, Pa.

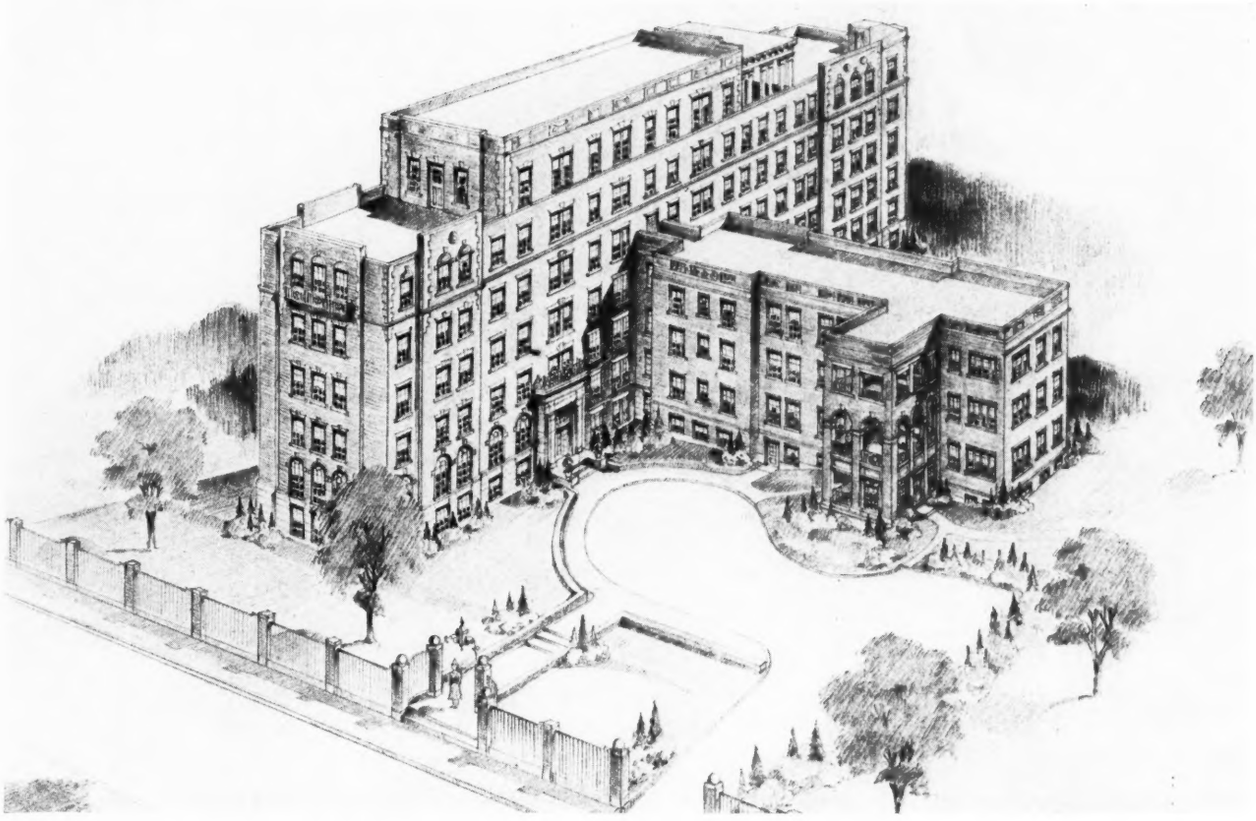
The bill is in the form of a four-page leaflet. On the first page is a friendly message from the hospital, promising a high quality of service and hoping the patient's stay will be a pleasant one on which he will be able "to reflect with much satisfaction and credit to the hospital."

Pages 2 and 3 give information regarding charges and what they cover, visiting hours, dining room for guests, overnight visitors and telephone service.

On the fourth page comes the bill, which is an estimate of the first week's expenses. It is explained below the itemized account that the bill is payable on admission and must be paid within a week. Instructions make it plain that bills are rendered weekly and that room patients who fail to pay will be transferred to beds in the wards.

H. G. Fritz is superintendent of Conemaugh Valley Memorial Hospital.

Probably you can think of one or more practical ways to save time or increase efficiency. The Modern Hospital will welcome your ideas to put before other hospitals



Modernization of the Nurses' Home Need Not Be Costly

By EDWARD F. STEVENS, F.A.I.A.
Stevens, Curtin & Mason, Architects, Boston

EVERY hospital is faced with the problem of adequate housing for its nursing staff. How often it happens that small hospitals, after erecting and completing their new buildings, find their funds exhausted and no adequate provision made for the housing of nurses.

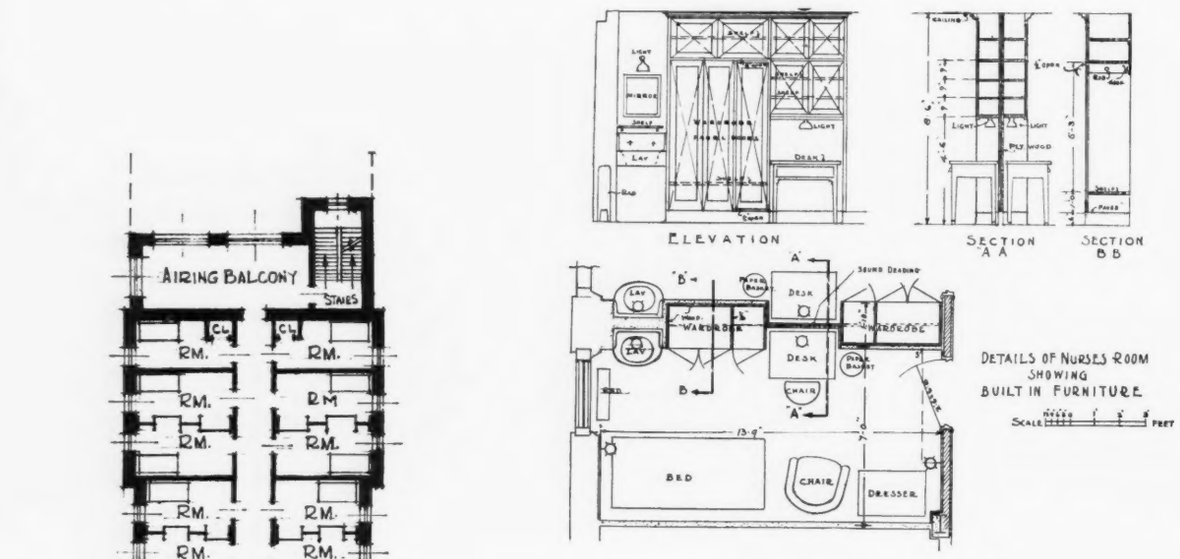
Nurses must be housed and it generally follows that old residences are brought into play. When one house is filled, another is requisitioned. It is argued that if these buildings were sufficiently comfortable for family occupancy they should be sufficiently so for the nurses, and that the old house is far more adaptable for housing the nursing staff than for housing patients. But there is still much to be desired in the matter of efficiency.

When asked what to do to make such a house into a nurses' home, one would like to say, "Pull it down and build a new building." But in these days of strict economy, perhaps a new building is out of the question. Since the old house must be used for this purpose, then, how may it be changed, added to or otherwise modified with moderate expenditure so as to give efficient service?

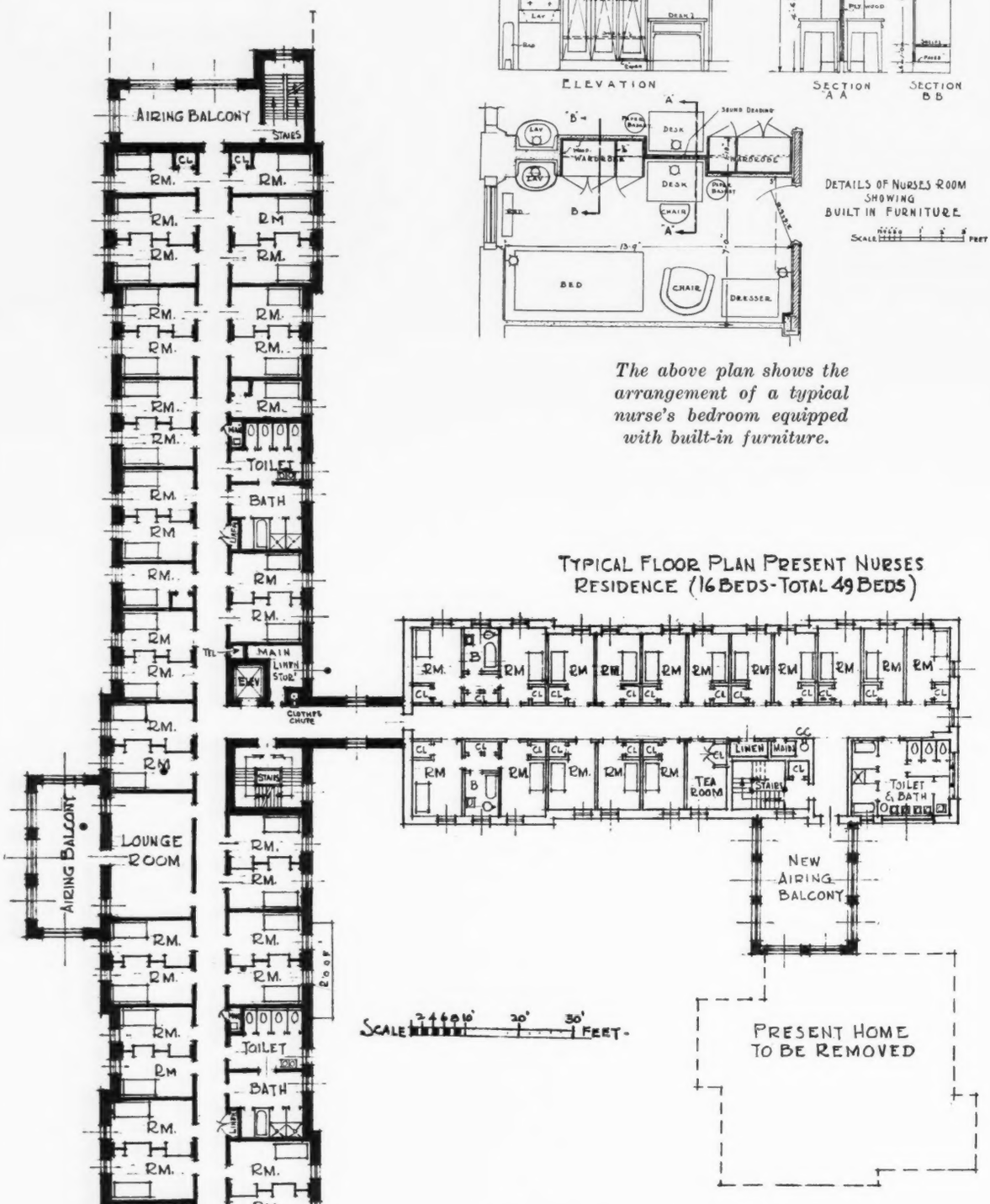
The home or residence must provide sleeping accommodations. It must also serve as the social center of nurses off duty. And, in addition it must become the school for teaching purposes. Therefore larger areas than the old house affords are needed for classrooms, demonstration rooms and laboratories.

Rooms in the hospital are often used for teaching but with the hospital's normal growth these rooms are needed for patients. It is difficult to say just how and where to make the necessary changes to provide for teaching rooms but we shall consider one or two examples.

A thirty-bed hospital was presented with an old residence for use of the nurses. This house contained the traditional parlor, dining room and kitchen on the first floor, with a narrow entrance



The above plan shows the arrangement of a typical nurse's bedroom equipped with built-in furniture.



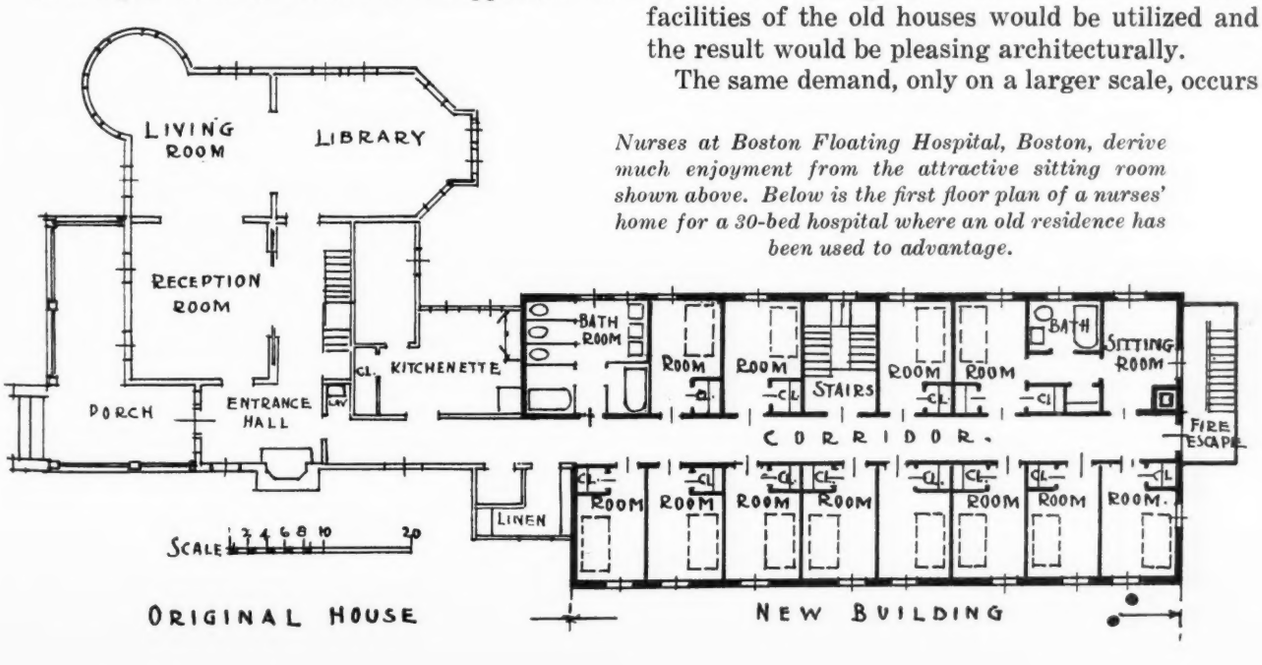
This drawing shows a typical floor of a proposed nurses' residence for a 200 to 500-bed hospital. The proposed addition is shown at the left, drawn in heavy lines.

hall and a single flight of stairs leading to the second floor and attic. On the first floor the parlor, all too small, served as the only social room for the nurses. The dining room and kitchen—no longer needed for their original uses since the nurses dine in the hospital dining room—were divided into sleeping rooms and toilets for several nurses. The second and third story rooms served as sleeping rooms, each containing one or more beds. More rooms were needed, however.

In this particular case the land "dropped off" at the rear and by careful planning a two-story addition was made. The grade of the land made it possible to provide the badly needed lecture and demonstration rooms together with rooms for the janitor in the basement or ground floor.

Again it may be that two small country houses built on adjoining lots can be secured. The architect could resort to the simple expedient of connecting these two houses with a building one or more stories high which would contain administration, social and teaching facilities. At the same time all facilities of the old houses would be utilized and the result would be pleasing architecturally.

The same demand, only on a larger scale, occurs



Nurses at Boston Floating Hospital, Boston, derive much enjoyment from the attractive sitting room shown above. Below is the first floor plan of a nurses' home for a 30-bed hospital where an old residence has been used to advantage.

when the 200 to 500-bed hospital needs to expand its nurses' accommodations. The floor plan on page 46 illustrates a proposed solution for this problem. This is the expansion of the plan published in The MODERN HOSPITAL for April, 1922. This home, adequate with its adjoining building in 1922, needs to be enlarged and a way to meet the problem is shown here.

The social and teaching rooms used in 1922 are now utilized as offices while in the new building are provided enlarged facilities for teaching and social intercourse as well as rooms and offices for officials of the training school.

On the ground floor of this new addition are lecture and demonstration rooms, laboratories and classrooms. On the first floor we find a large living room with reception rooms, guest rooms and a suite for the superintendent of nurses. The new addition connects with the 1922 section and the home of 1922 is absorbed into the design for the new training school. The exterior of the building is shown on page 45.

On the upper stories there are single rooms for 157 nurses. These rooms, with the present building, complete a 200-bed nurses' unit. A series of dormitories of 3 to 5 beds, totaling twenty-one beds, is provided for night nurses' day rest.

Nurses' rooms are planned with built-in wardrobes or closets and with built-in desks and bookcases. This entire built-in unit occupies but 8 feet by 13¾ feet and leaves clear floor space of 7 feet by 13¾ feet. Details of construction are shown in the small drawing at the top of page 46.

Much can be done in the old home to create a more homelike atmosphere. For example, new wall treatment can be applied. Two old rooms can be thrown into one for class or study. Large sleeping rooms can be divided into two. Many persons believe that no room is large enough for two to sleep in comfortably and it is just as well to have the room so small that it will not hold two beds.

Many hospital specialists believe that wall paper, which makes for a cheerful home, is unhygienic for a hospital or nurses' residence. But with the simple washable wall coverings of today this objection does not hold good, and an unattractive room may be freshened and modernized at little expense. Study of modern decoration and furnishings will show how easy it can be to improve and modernize the nurses' residence.

Much time may be saved by providing adequate intercommunication from "center" to the nurses' rooms. A simple telephone in each room puts the matron in immediate touch with each nurse for calling or giving instructions. These phones are not intercommunicating nor are they connected with outside service.

Improvement in ventilation may be secured by inserting ventilating panels in the entrance doors.

Whatever is done to improve and make more homelike the living quarters of the nurses and to get them away from the exacting environment of the hospital when off duty adds to their efficiency when they are caring for the hospital's patients.

Protection From X-Rays and Radium

Workers in x-rays and radium and the personnel of radiologic departments are constantly subjected to the effects of radiation. A number of protective measures for workers were recommended by the third International Congress of Radiology, which met in Paris.

X-ray and radium workers should work no more than seven hours a day, five days a week, and they should have four weeks' vacation a year. They should be given a complete medical examination at least twice a year, according to the recommendations made at the congress.

The operator should not expose himself unduly to a direct beam of x-rays, and the tube should be surrounded as completely as possible with protective material of adequate lead equivalent. In diagnostic work, the operator should be protected from scattered rays by a screen of lead equivalent not less than 1 mm.

It has been found that in screening, the safest position for the observer is in front, the patient's body and the x-rayproof glass forming an effective barrier to the scattered radiations which generally pass out sideways. In x-ray therapy, it is best for the operator to be stationed completely outside the x-ray room behind a protective wall of lead equivalent not less than 2 mm. Inspection windows should have protective lead values equivalent to that of the surrounding screen or wall. Gloves should be worn having a protective value of not less than ⅓ mm. and protective aprons should have a minimum lead value of ½ mm.

Workers in radium require protection from the effects of the beta rays on the hands and of the gamma rays on the internal organs and on the vascular and reproductive systems. To protect the hands, radium should be manipulated with long handled forceps, preferably wooden. These forceps should be carried from place to place in long handled boxes that are lined on all sides with at least 1 cm. of lead. All manipulations should be done as rapidly as possible.

In order to protect the body from the gamma rays, a screen of not less than 2.5 cm. of lead should be used while handling radium. Nurses and attendants should not remain in the same room as patients who are undergoing treatment with more than half a gram of radium. Similar precautions apply to radium emanation. The escape of emanation should be carefully guarded against and the room where it is prepared should have an exhaust fan. Thin rubber gloves should be worn when the emanation is likely to come into contact with the fingers.

Radium should be stored in a safe as distant as possible from the personnel. Radium tubes and applicators should be inserted into separate lead blocks in the safe, the thickness of the lead lining depending upon the amount of radium. A separate room should be provided for the make-up of screened tubes and applicators and this room should be occupied only during such work.

Making and Using Diagnostic Records —A New Method

By H. B. LOGIE, M.D.
Executive Secretary, National Conference on Nomenclature of Disease, New York City

A NOMENCLATURE of disease should be more than a convenient list of labels to identify morbid phenomena, whether these are actual diseases, symptoms, or anatomic or physiologic abnormalities.

If the list includes on an equal footing glomerulonephritis, uremia and renal insufficiency, there may be so much choice in each case that hospital records are marred by inconsistencies and overlappings and cannot be relied on to provide exact and full information. If some cases of glomerulonephritis are diagnosed uremia and some cases of uremia are really cases of hypertrophy of prostate, and many cases of renal insufficiency are neither the one nor the other, hospital records are only an incentive to loose thinking. They had better be thrown in the fire.

The Better Hospitals Follow a Nomenclature

All hospitals have some sort of a clinical record of each patient if it is only a card with the name of the patient and a label for the disease. Some hospitals record the diagnosis in the terms the particular clinician chooses, but the better hospitals follow a nomenclature of some sort more or less faithfully. In a good many hospitals this nomenclature is kept in the record room and the record librarian is expected, with whatever organized or occasional help she can get, to interpret the doctor's diagnosis in terms of the accepted nomenclature, or in still other terms as the occasion seems to demand.

The Standard Classified Nomenclature of Disease,[1] recently published by the cooperative effort of a representative group of American physicians, makes a noteworthy attempt to solve this difficulty. Prepared for the primary purpose of establishing a uniform standard of diagnostic terms, this Nomenclature offers other and perhaps even greater advantages. It makes a clear distinction between the disease itself and its manifestations; auricular fibrillation, uremia, hemiplegia and the host of similar terms that all too commonly pass for diagnoses are relegated to their proper place. The physician is expected to determine what is fundamentally wrong with his patient before making a diagnosis.

It is the usual thing to demand a diagnosis from the physician. About the only alternative he has is to record "disease undiagnosed." Such diagnostic knowledge of the incomplete case as the clinician has is either lost altogether from the records or exaggerated into a diagnosis that he cannot substantiate. The new system of nomenclature faces this difficulty in a sensible way. Every gradation of diagnosis is provided from "disease undiagnosed" to an adequate definition of the morbid process. This method, instead of compelling the clinician to guess, encourages him to think systematically and to record no more and no less than he can diagnose.

This type of visible filing frame is especially adapted for diagnostic records. It may be suspended on a wall or exposed in some other manner.

The text looks formidable; it contains what seems like an enormous number of diseases. The complaint has occasionally been made that it should be simplified. A homely illustration may justify the apparent complexity of the book. Suppose there was such a simple classification of botany

[1]Compiled by the National Conference on Nomenclature of Disease, published by the Commonwealth Fund, 41 East Fifty-Seventh Street, New York City.

360-123 Tuberculosis of lung

No.	A	S	O	N	W	P	IS	Assoc. Dis.		Oper.	An	R	PM	Dy
13579	5	0			1	4	35	710-123	650-123			X	1	36

Fig. 1. The diagnosis card shown here is intended to assemble in one record all the major facts about the patient and the case that may be of clinical importance.

that we had only such names as grasses, herbs, shrubs and trees. Then try to buy an American Beauty rose bush by mail.

Actually, a classification of diseases cannot be any more simple than medicine itself. For all its size, the Nomenclature is adapted to the needs of the smallest hospital and the humblest physician. Measles and appendicitis are just as easily found, by means of the index, as in a book one-tenth the size. If the clinician's knowledge is so limited that he can diagnose nothing more exact than "heart disease," he is at liberty to record "undiagnosed disease of the heart." The only difference between the two expressions is that the physician is now allowed to be frank with himself and to face the diagnostic issue squarely. The new Nomenclature stands for what might be called an ethics of diagnosis.

System Must Be Installed Properly or Not at All

This Nomenclature is a medical book for use by physicians. It can be used for hospital records only if the members of the staff are familiar with it. No record librarian can make over the loose and varying diagnoses that come from some clinicians into the precise terms of the Nomenclature. The doctor must make his diagnoses and be responsible for their accuracy.

Occasionally a record librarian, with commendable zeal, obtains a copy of the Nomenclature and attempts to install the system. Or the superintendent undertakes to set up the Nomenclature as a diagnostic guide by putting a copy in the record room. It would be just as sensible to get a mechanic to install an anesthesia machine without the knowledge of the anesthetists or surgeons. Unless the system can be installed properly, it should not be installed at all. It cannot be installed properly unless the members of the staff, after careful consideration, decide to stand loyally behind it.

Hospitals that have installed the new system have not regretted the step. From practically all comes the report that the members of the staff are showing more interest in it every day. In general, they are more anxious to make exact diagnoses, and even find a fascination in what many would have considered a dull book. In one large hospital the educational effect on the interns has been noted; in several, the simplicity of the system has gained the commendation of the record room staff; in all, diagnoses have been given more careful thought, and the diagnostic records are becoming every day more useful to the physicians and a surer and more complete record of the hospital's activities.

The work of the National Conference on Nomenclature of Disease has been financially supported principally by the Commonwealth Fund and as well by the Metropolitan Life Insurance Company, the Prudential Insurance Company of America, the Connecticut General Life Insurance Company, the Josiah Macy Jr. Foundation, and by a number of the national medical organizations, which have sponsored and assisted in the preparation of the Nomenclature.

The system has been installed in about 110 hospitals, including those associated with the medical schools of Harvard, Yale, Columbia, University of Pennsylvania, Western Reserve University, Tulane University, Vanderbilt University, Rush Medical College, University of Nebraska, George Washington University, Stanford University. It has also been installed in hospitals in Canada, Palestine and the Dutch East Indies. It is being used in some fashion in more than three hundred other hospitals, mostly smaller institutions, few of which have taken advantage of the opportunity for consultation which the National Conference provides. In cases in which physicians have given care to the use of the Nomenclature, it is working smoothly and well, even though a few physicians in some of these hospitals have been slow in making the most of the opportunities this diagnostic system affords.

35 Hemoptysis

Case No.	Diagnosis	Case No.	Diagnosis	Case No.	Diagnosis
13579	360-123				

Fig. 2. This card is for recording important symptoms.

Methods of keeping card records in most hospitals leave much to be desired. In very few is the system comparable to the methods used in business offices. In a business office there is no ambiguity and no overlapping, because every item has one

410-196 Active rheumatic heart disease

Case No.	A	S	N	O	W	P	Imp. Sympt. A	B	C	D	Assoc. Dis.		R	PM	Dy
12468	6	6	1	1	1	2	44 65	25	44	29 300 544	010-196	420-196	5		43

Fig. 3. Special card for recording heart cases according to the precise requirements of the American Heart Association. This card has space for ten or more cases.

name and is rigidly classified. It is unnecessary to search ledgers except for details; information is abstracted and classified and made available in mass figures.

Many hospital record rooms keep cards containing names of patients and the corresponding diagnoses, or lists of patients grouped according to the attending physician; or the card shows the name of the patient, the diagnosis and the corresponding case number. A number of hospitals record, by antiquated devices, whether an operation or a necropsy has been performed, and some add the name of the attending physician or his initials for posterity to interpret. However successfully modern business methods are being used in the management of hospitals generally, it appears that, except in a rare instance, improvements in the business world have left the hospital record room quite untouched.

Modern Card Systems Ensure Speed and Accuracy

Physicians seem to have a certain distrust of card systems. Occasionally they complain that cases are lost track of, although the history is still on file. Whatever the cause—and it is as often as not the physician's own ambiguity—it seems to be necessary for the physician to assemble all the case records under a given diagnosis and make his own search for those in which he is interested.

If the record room could use a modern card system, the physician could safely leave to the record room the search for all cases manifesting heart block, let us say, no matter what the diagnosis under which the case was recorded; he would not have to toil through all the case records on diseases of the cardio-vascular system. Moreover, the selection could be carried further for him, such as heart block at different age periods, in cases with necropsy, or in cases under any combination of these conditions.

It may be contended that record rooms have difficulty now keeping pace with physicians' demands and that, if such card systems as we have are not infallible, is there not danger that an added burden will prove too great a strain for the record room? The question is not difficult to answer. A businesslike system promotes businesslike habits both in the physician and the record librarian. Moreover, the newer systems are designed not only for accuracy but for ease and speed, and it is easier to use the modern system than the old-fashioned one. If further justification is needed, there is the complete one that it works in other business and is bound to work if properly applied to the business of keeping hospital records.

Diagnoses in the Standard Classified Nomenclature of Disease are coded so that cards may be filed in numerical sequence. Codes are so arranged that cards filed in this way fall automatically into a clinical classification. The record librarian need have only the most general knowledge of what this classification is based on. If the codes are followed, the classification looks after itself and not only do diseases of the same organ fall together, but diseases of like nature occupy corresponding positions under the heading of the organ. In whatever way the cards have to be searched, they will be found grouped in clinical order.

The Nomenclature itself goes no further than the diagnosis of diseases and important symptoms and syndromes, the former being kept separately and constituting the diagnostic record proper. The

A 41 Anginal syndrome

Case No.	Diagnoses	Case No.	Diagnoses	Case No.	Diagnoses
12468	410-516				
12483	410-196.0				
12527	410-533				
12552	430-5x7				
12584	410-196.0				
12614	410-516				
12647	410-y00				
12691	430-911				
12723	430-147				
12788	430-704				

Fig. 4. Manifestations card to illustrate the range of diagnoses in cases manifesting anginal syndrome.

card should contain the various diagnoses and records of important symptoms. Being in code, these occupy relatively little space on the case card.

In order that the card may be used to record such other clinical information as may help the physician in his search of records, the code system is recommended as a means of brief record and rapid search. The card illustrated in Fig. 1 is 3 by 5 inches and has room for ten or more cases, with considerable information about each. One such case is entered. The interpretation is as follows:

Case No. 13579. Age group, puberty to 25; male, single; medical service; physician, Dr. A. B. Jones. Diagnoses: tuberculosis of lung; tuberculosis of kidney, tuberculosis of small intestine. Important symptom: hemoptysis. Result: died. Postmortem: complete. Days in hospital: 36.

Use of these cards is not necessitated but merely facilitated by the Standard Classified Nomenclature of Disease. The simplest cards can be used

7x4-000 Pregnancy delivered

No.	A	B	C	D	E	F	G	H	I	Other diagnoses	R	Pm	Dy

Fig. 5. Obstetrical cards for mother and child. The columns A to I refer to the supplementary classification of obstetrical conditions.

790-000 Term birth, living child

Ch. No.	Mth. No.	Other diag.	Ch. No.	Mth. No.	Other diag.

with this system. This card is merely a suggestion; it is expected to be modified by any hospital to suit its particular needs. Codes may be prepared by each hospital to suit its own purposes, and advice will gladly be given by the National Conference on Nomenclature of Disease. Some of the columns may not be desired; additional columns may be necessary; the code for age may be replaced by the age in years. The following nondiagnostic codes are suggested:

Age—0, newborn; 1, from 0 to 3 months; 2, from 3 to 12 months; 3, from 1 to 5 years; 4, from 5 years to puberty; 5, from puberty to 25 years; 6, from 25 to 35 years; 7, from 35 to 45 years; 8, presenile, and 9, senile.

Sex and Marital State—Male, single, 0; male, married, 1; widower, 2; male, divorced, 3; male, separated, 4; female, single, 5.

Result of Treatment—1, apparently cured; 2, arrested*; 3, apparently arrested*; 4, quiescent*; 5, improved; 6, unimproved; 7, convalescent; 8, not treated, and X, died. Asterisks indicate that the classifications are especially for pulmonary tuberculosis.

Necropsy—0, none; 1, complete; 2, head; 3, thorax; 4, abdomen; 5, complete except head, and 6, at site of operation.

The name card is sometimes filed in the admitting office and sometimes in the record room. Record keeping will be simplified if a distinction is made between records of patients and records of cases. The patient, as a person with a home and relatives, is the concern of the general hospital management; the clinical case and all that bears on it is for the attention of the record room. Therefore, the name card should contain the facts about the person who has come under hospital management and nothing else, except the bare facts necessary to link him with the case record, on the one hand, and with the diagnosis file, on the other. Case number and principal diagnosis will suffice for these purposes.

Age, sex, marital state, occupation and nativity have little bearing on the business management of the patient, especially since the name card gives the name of the nearest relative and the relationship. The hospital service to which the patient was admitted and the physician's name are facts of clinical rather than administrative importance. In a fair percentage of cases, the age, sex, marital state, occupation and nativity are, or may be, of clinical interest; in all cases, the attending physician may wish to identify his own records from the diagnosis cards. The diagnosis card shown in Fig. 1 is intended to assemble in one record all the major facts about the patient and the case that may be of clinical importance.

Cross reference cards are necessary to some extent in any record room. The elaborateness of the system depends on the need of the hospital. For example, Case 12345, recorded on the diagnostic card in Fig. 1 under tuberculosis of lung will appear also on two similar diagnostic cards headed 710-123 tuberculosis of kidney, and 650-123 tuberculosis of small intestine, respectively.

The Value of a Cross Reference System

If card records of important symptoms are kept, this case will again be recorded on the card headed 35 hemoptysis with the diagnosis shown in the second column (Fig. 2). The symptom card shows no details, since these can be found on the diagnosis card. The manifestations of disease, as distinct from the diseases themselves, are listed under various headings in the Nomenclature.

There is room for argument on the value of cross reference. It is contended by some that it takes less time to compare cards on different diagnoses and find the case numbers common to both. This argument may ignore the ease and speed of cross entry when codes are used instead of lengthy titles, or it may be a natural attempt to justify a system that has been long in use. Even if this argument is justifiable from the point of view of the record clerk, it is not from the clinical aspect: the card that gives the clearest picture (not necessarily the most detailed, however) of the case is to be preferred.

An entry on a card labeled broncho-pneumonia is not as illuminating as one that shows the measles, or appendicitis, or fracture of femur that preceded it. If diabetes mellitus preceded pulmonary tuberculosis, the association ought to be evident without a search for common history numbers on two cards. Nor does it solve the difficulty to provide "complication" cards, because it is sometimes difficult to determine whether an associated disease is a complication. Indeed it is better, in the record cards, to make no distinction between main diagnoses and complications, or between primary and secondary diagnoses.

Special Cards for Heart Disease

Special cards may be provided for heart disease. The list of supplementary terms to describe manifestations of cardiac disease is of interest not only to cardiologists but to all clinicians who wish to record heart cases according to the precise requirements of the American Heart Association. A special card used for this is shown in Fig. 3. This is similar to the card in Fig. 1, except that the column "Imp. Sympt." (important symptoms) is divided into four, headed A, B, C and D respectively, to correspond to the four sections of this supplementary list.

Interpretation of the case recorded in Fig. 3 will be found to be as follows: Case 12468. Age group, 25-35; female, married, American born, housewife; medical service; physician, Dr. B. C. Smith. Diagnoses: active rheumatic heart disease; active rheumatic pericarditis, active rheumatic endocarditis. Important manifestations: cardiac insufficiency, ascites; paroxysmal auricular fibrillation, auriculo-ventricular block (complete); signs of heart failure when patient at rest, patient unable to carry on any activity without discomfort; pericardial adhesions, myocardial hypertrophy, mitral stenosis. Result: patient not improved. Days in hospital: 43.

A cross reference system for the manifestations of heart disease is almost more necessary than the record of diagnosis. Physicians are so interested in the physiologic and functional aspects of heart disease that they sometimes almost seem to overlook the disease itself. They speak familiarly of "a case of heart block" almost as if this were a disease instead of a manifestation of a variety of diseases. However this may be, physicians like to arrange the cases together that show a common manifestation; hence the special "manifestations card" (a form of symptom card) shown in Fig. 4. It will be observed that all detail is omitted, the card showing only the case number and the diagnosis in each case of the particular manifestation. All other details can be determined from the diagnosis card.

The card illustrated shows the various diagnoses in ten cases in which anginal syndrome was present. The diagnoses are as follows: Case 12468, arteriosclerotic heart disease; Case 12483, inactive rheumatic heart disease; Case 12527, hypertensive heart disease; Case 12552, infarction of myocardium; Case 12587, inactive rheumatic heart disease; Case 12614, arteriosclerotic heart disease; Case 12647, undiagnosed disease of heart; Case 12691, myocardial degeneration, cause unknown; Case 12723, syphilitic myocarditis, and Case 12788, myocardial disease due to emphysema.

The two cards (Figs. 3 and 4) are complementary and, when filled in with codes, show the various manifestations in a series of cases of a particular heart disease, and the various diseases that produce a particular manifestation in a series of cases. They present an up-to-date summary of the hospital experience for the physician's own enlightenment or for use in clinics; as such they are much more impressive than facts in textbooks.

The Nomenclature gives a coded arrangement of obstetric conditions. This list overlaps to some extent the arrangement of obstetric diseases and conditions in the main text. It is intended as a means

Case No. Age Sex Marit. state Occup. Nat. Serv. Dr.

Diag. Result Op. Days
1
2
3

Total Days

Imp. manif. of Anes. (type) P. M. (type)
1
2
3

Fig. 6. Suggestion for portion of summary sheet devoted to clinical information.

of recording, under appropriate headings, the facts of interest in any obstetric case. Special cards should be used, designed generally as indicated in Fig. 5. Any of the columns shown in Fig. 1 may be added, as determined by the obstetric service in any hospital. Besides recording the facts of clinical interest, these cards afford an easy method of computing live births and stillbirths under various headings. The codes 01, 04, 05 and 08 represent the various types of live births, and 02, 03, 06 and 07 represent the various types of stillbirth. This is especially valuable when no card is prepared and no case number provided for the newborn child. In any case it is useful for the record of stillbirths and abortions, early and late.

In many hospitals, the obstetric division keeps its own detailed record. The National Conference was particularly pleased to be able to prepare a standard method that seems suitable for the obstetricians of all hospitals.

Particularly in hospitals for special diseases, other types of card may be required. For neurologic diseases, the card illustrated in Fig. 1 may suffice, the manifestations being recorded in the column headed "Imp. Sympt." Cross reference cards may be prepared for such of these as are required for mass record.

A Practical Summary Sheet

In tuberculosis sanatoriums a special card will be necessary to record the degree of involvement. There is already a place for recording the stage of the disease on discharge (under the heading "Res.") ; a special column will probably be needed to record the stage of the disease on admission.

In all cases, the column for important symptoms may be enlarged, as it has been in the "heart card," to accommodate the record of physiologic, chemical, roentgenologic or anatomic manifestations. By means of cross reference cards, cases of all diseases characterized by a common important manifestation may be assembled on one card.

In order that the facts on the summary sheet of the case history may be quickly and accurately transferred to the record card, it is desirable that these facts be grouped and arranged in an order to conform to the order on the diagnosis card. A suggestion for this portion of the summary sheet is presented in Fig. 6. The record librarian, with this sheet in front of her, rapidly translates the information into code and enters it upon the various cards which she can withdraw from the file and place on her desk together in readiness.

Space is afforded for the result of the treatment of each disease diagnosed. The criticism has been made by hospital physicians themselves that the clinical result is not usually given the attention that it deserves and that one of two entries is usually made: "improved" or "died." Often, in reporting a series of cases, the physician has to reread the reports to determine whether the result is correctly recorded on the summary sheet, an illustration of the fact that the filed records are what the physicians make them. From experience with the Nomenclature in many hospitals, one learns that the more accurate the system the more closely and conscientiously do physicians follow it. A summary sheet of this kind does not invite hasty and careless disposal.

The analysis of the days in hospital is intended only for those institutions that require particular information regarding the number of hospital days chargeable to each disease. If a patient is treated for simple fracture of the femur and retained in hospital because of an infected laceration of the back, or if a chronic disease is discovered fortuitously, the fracture would be charged only with the days which the treatment of it would otherwise have demanded. The total days are, of course, the total days in hospital and not the arithmetical total —on the principle of concurrent sentences to jail.

Perhaps the most helpful feature of this form of summary sheet is the distinction it enables the physician to make between diseases and symptoms. With it before him, he is unlikely to record congestive heart failure, acidosis, or renal insufficiency as a diagnosis, because he has a place at hand where the record of these important manifestations may be preserved.

The code system of the Nomenclature was designed partly in anticipation of its use as a guide for punch cards, since it may even now be conceded that punch cards are necessary for mass statistics. Since so few hospitals use them, I omit detailed discussion of the question now. I may say, however, that they provide a means of bringing together to one center the records of the clinical activities of all well managed hospitals of one city, or one section of the country, or even the whole country as soon as the Standard Classified Nomenclature of Disease comes into universal use.

The effect would be not merely, and not principally, to provide more accurate statistics on morbidity or mortality, important as these would be, but to make the record of the clinical work in a large number of hospitals almost as easily and quickly available to a physician as the work in his own.

Physicians Should Determine Type of Card Used

It is true of punch card systems as it is of any other method of using a diagnostic nomenclature, that the physicians of each hospital must decide upon the design and the details of the card, with whatever expert help they can obtain. Nobody but a physician familiar with the use to which records are put is able to distinguish between the visionary and the practical uses of the punch card in hospitals. It is folly to spend time and money on the massing of facts for which only the occasional physician might have any use, and for which, in any case, he would consult the case histories themselves.

Once the premise is clear that punch cards or any record cards are merely to guide search of the histories and not to provide synposes, the physicians will adopt a judicial attitude and be guided by their actual present, and likely future, practical needs.

Remodeling—The Next Best Thing

Age—in spite of a prevalent belief to the contrary—is in itself no criterion of a hospital's usefulness. A number of buildings hundreds of years old still carry on satisfactorily. If the structure is sound and fire resistant then everything else can usually be replaced and the building made functionally satisfactory

By CARL A. ERIKSON
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A WATCH has 117 different pieces. Each one helps make the wheels go round. If the watchmaker changes the size of the case, he redesigns the works; if he adds a striking mechanism, he changes it in other ways; if he essays a calendar watch, he does something else to the works.

As better materials and methods have been developed the watchmaker has made use of them. The invention of the escapement, the balance wheel, the hairspring and the compensation balance has been a part of the development of what we know as the watch. Diamonds and sapphires were the costly jewels sparingly used for a few bearings; the synthetic jewels available today permit the use of more of them. Special metals have affected watchmaking just as other metals have affected hospital design.

But even the most elaborate watch is only a toy in comparison with the simplest hospital structure. There we find not only constant improvement in the mechanics of the "works" but an ever fluctuating load. It is as though we asked the watchmaker for an enchanted watch that would shorten the boring hours and prolong the pleasant ones. But in our hospital chronometer, many of us were quite proud of our escapement—the surgery. It was found to be too small, so a bigger one was added. Then someone found that a laboratory balance wheel might be useful, so it was added, found to be too small, enlarged, moved and enlarged again. To this expanding mechanism was attached the compensation balance—the x-ray—which was found to be too small, enlarged, moved and enlarged again. Then it was decided that this wondrous mechanism could operate several more clock faces, so they were added. These found the weakness in the mainspring, so in went a bigger and better one.

Thus as we wind up today, we find many hospitals both fearfully and wondrously made. Cases bulge here and there; the works are a maze of wheels, springs and gadgets; the mechanism whirrs discordantly and threatens to break down on the slightest deviation of routine. The wheels of such hospitals keep turning, thanks to the ingenuity, skill and energy of the personnel and to the liberal oiling of philanthropic funds.

Those who know such a hospital intimately wonder when it will slump into a heap of parts. Others observe the external bulges and hear the whirring of the internals and suspect that they are but symptoms of deep-seated wasting disorders.

It's Easy to Throw the Mechanism Out of Kilter

While these weaknesses are not quite so noticeable in the new hospital as in the old one, yet they are often there. The large hospital may suffer from a multiplicity of x-ray departments or from the distance that must be covered to reach its x-ray department; the small hospital may suffer from a department that is too small. In one hospital the only place for film display seems to be the entrance lobby. The large hospital may have kitchens ad infinitum—for patients, for private patients, for nurses, for help, for personnel; the small hospital may find itself with but a single dining room for personnel and help. The old hospital may have too many large wards; the new one may have too many small rooms.

The hospital executive used to look forward to the day when he might build an addition to solve some of these evident problems. An addition usually did solve some of them but too often it brought forth a flock of new and unsuspected ones. Few

persons realize the intricate and complex mechanism of the hospital structure. A pound added here must be counterbalanced there lest the mechanism be thrown out of kilter.

The process of taking the waste out of a structure is a commonplace of industry. Reducing production costs through a restudy of processes, equipment and new products is a necessity often entailing large expenditures. But before an industrial plant is rehabilitated a number of basic questions must be answered affirmatively. Is the plant well located? Is there room for the maximum anticipated capacity? Do existing buildings warrant expenditures for remodeling or should they be torn down?

Remodeled Interiors Prove Satisfactory

The same questions should be answered for the hospital. Only the last one needs any comment. Age—in spite of a prevalent belief to the contrary—is in itself no criterion of a hospital's usefulness. A number of buildings 400 and 500 years old still carry on, and a respectable number of hospital buildings more than 100 years old still satisfactorily house the sick. If the structure is sound and the building is fire resistant then everything else can usually be replaced and the building made functionally as satisfactory as a new one.

In one forty-five-year-old building every interior partition and all plumbing, heating and wiring could be removed. The entire interior could be replaced by the most modern detail, arranged to fit present needs. All of this could be done at a cost of considerably less than half of the $1,000,000 that it would cost to replace the building. The only difference between this rehabilitated old building and a completely new one would be the exterior appearance. Isn't a half million dollars too much to pay to have that hospital's face lifted? But the architect, at somewhat greater cost, can even decorate the new façade in the latest fashion.

In a program of this sort the procedure will be determined by the impelling motive. Is it a desire to increase revenue, to decrease operating cost, to improve service, or is it a mixture of all of these? The procedure will be importantly influenced also by the fact that the hospital must be kept functioning during the changes. A plan making provision for present as well as possible future needs must be prepared, and this is infinitely more difficult than designing a new hospital. Since only a part of the changes in a comprehensive development can take place at one time, it may take a number of years to complete it, for example, five years elapsed before one large hospital's remodeling program was completed.

The beginning of increased revenue is at hand. Is your entrance way attractive to patients and their friends? If it is large enough and well placed, then perhaps it is dingily decorated or drearily furnished. Or it may harbor some of the eminently practical and thoroughly ugly mission furniture of twenty-five or thirty years ago. Such problems are simple and yield readily to treatment.

The adjustment of accommodations to the economic status of patients is neither difficult nor expensive. Large wards may be broken up into small ones or into private rooms. Most private rooms can be changed into two-bed rooms at will. It may even be desirable to tear out baths in older private rooms and, by rearranging the partitions, add to the bed capacity. Or in older hospitals with large private rooms, baths or toilets may often be added without reducing the number of rooms thus materially improving their desirability.

Then it may be desirable to throw away most of the old furniture and redecorate under the guidance of a competent decorator—not the house painter. Amateur efforts are like those of the baby in the jam pot—eminently satisfactory to the baby but to no one else.

It will also pay to take down a few signs about silence and experiment with sound absorption material in the corridors and elsewhere.

Then thought should be given to the ways and means used by visitors to get around the hospital. Do they need a map or a guide to get them to their destination? And when they ride in the elevator, does it lunge or is it a smooth eight-cylinder car with knee-action and free wheeling? Perhaps the accretions to the building have resulted in too many elevators. Three modern elevators will often do a better job of transportation than six of another kind. One good elevator substituted for a poor one often pays for itself in operating economies.

Many Kinds of Waste

Sometimes wasted effort is the result of too cramped areas or of too liberal ones. I recall one hospital with one operating room 30 feet square and another one about 8 by 10 feet. Another hospital has many empty beds but no place to empty bedpans. These are easy readjustments. Sometimes one wonders why they were not made long ago.

It used to be customary to put in an enormous stairway, usually opposite the main entrance. It invariably wound around a canary cage called an elevator. What the original justification may have been will ever be a mystery. These stairways are still to be found in a great many hospitals, large and small. They are drafty, wasteful, hard to keep clean and little used. To tear out these stairs, put in new floors and substitute needed facilities or

added patient quarters would reduce costs, increase revenue, improve appearance, enhance comfort and improve service. That ought to be enough for anybody's money.

Many other kinds of waste spaces develop during the years. In one hospital more than 10,000 square feet, probably valued at $100,000, was recaptured at small expense. Another institution could vastly improve its entrance facilities and its offices by making comparatively inexpensive changes so as to use space once required for other purposes but no longer needed. Installation of a birth department well separated from the operating rooms would probably result in a larger number of obstetric patients.

Then there are the many hospitals that find both their patients and their staff being enticed away by the glitter of a newer and more attractive rival hospital. But glitter can be supplied easily and it is not necessarily expensive. Skillfully chosen furniture, decorations, lighting fixtures, paint and fabric will work wonders, whether in the operating room, the corridors, the patients' rooms or the kitchens.

The mathematician executive will revel in demonstrating that each improvement will pay for itself. Careful study of the possibilities of lowered food service costs may result in important building changes or rehabilitation. One hospital that requires a motor truck and eight men five hours a day to carry laundry might profitably make a rather large capital investment to eliminate such waste. Another, by changing the location of one piece of equipment, could eliminate one name from the pay roll.

Then there are possibilities in the storerooms—their grouping, arrangement and equipment. The large hospital should have sufficient, well arranged workshops for carpenters, plumbers and upholsterers. The small one should have some place properly equipped for that invaluable Jack-of-all-trades, the repairman.

Don't tinker in this process of rehabilitating the hospital. Prepare a comprehensive program and lay the course accordingly. If you are then driven off the course by storm, you can beat your way back. Or, if a particularly favorable wind promises to take you slightly off, use it. If you are becalmed, don't be disheartened; the wind always springs up again. Know your course and lay to it.

The Hospital Formulary

Robert A. Hatcher and Wendell J. Stainsby, of New York City, writing on the hospital formulary in the *Journal of the American Medical Association*, discuss the formulary adopted recently at the New York Hospital, New York City. The use of the formulary has resulted in marked economy, it is pointed out, although the precise amount saved to the hospital has not as yet been determined. Excerpts from the article are given in the following paragraphs:

"Large hospitals find it necessary to limit the prescriptions of the staff mainly to selected formulas, and this system has tended to promote the use of proprietary formulas, which usually cost much more than their official equivalents without corresponding advantage. The physicians of the staff do not often come in contact with the purchasing department or the pharmacy of the hospital, but they are frequently interviewed by the representatives of pharmaceutical manufacturers, who persuade them that their preparations have marked advantages over the pharmacopeial.

"The formulary of the New York Hospital was prepared by a committee which invited representatives of every department to present formulas desired for their departments. In every case where a complex formula or a proprietary preparation was desired the advocate of it was requested to present evidence of its superiority over the equivalent official preparation, and unless such evidence was submitted the committee declined to admit the article, or, in a few cases, admitted it with the proviso that it would be deleted unless evidence was presented that would justify its retention in any subsequent edition of the formulary that might be published.

"The committee adopted the following rules governing the admission of articles to the formulary:

"Rule 1. Simple official (pharmacopeial) substances will be admitted when requested unless they have become superfluous.

"Rule 2. No article will be admitted, except for controlled research, before its therapeutic value has been established.

"Rule 3. No article of secret composition will be admitted.

"Rule 4. No article which is sold under a proprietary name will be admitted under such a name if a substance of identical composition can be obtained under a nonproprietary name.

"Rule 5. No mixture of two or more active substances will be admitted unless evidence is submitted that the mixture presents therapeutic advantages over the simple substances.

"Rule 6. No proprietary article will be accepted before it has been accepted by the council on pharmacy and chemistry of the American Medical Association for inclusion in New and Nonofficial Remedies.

"Rule 7. Requests for articles not included in the formulary of the hospital, but which are desired for use in controlled research which has been approved by the head of the department in which the investigation is to be conducted, will receive consideration by the committee.

"Rule 8. It is the policy of the committee to discourage the intravenous and intramuscular injection of substances which should be administered orally."

The authors point out that the plan requires for its fullest success a highly skilled pharmaceutical staff capable of cooperating with the medical staff of the hospital in the conduct of therapeutic research.

Someone Has Asked—

What Precautions Should Be Taken When a Therapeutic Abortion Is Proposed?

Some persons believe that an abortion is never necessary. On the other hand, many scientifically trained ethical physicians conclude in certain instances that it is justifiable to terminate pregnancy in order to save the life of the mother. Such instances arise in cases of tuberculosis, the toxemia of pregnancy, chronic heart disease and certain other conditions.

When a visiting physician believes that a therapeutic abortion is indicated he usually desires to share the responsibility with one of his medical friends. To call a colleague in consultation is the first step of the careful physician. The colleague inscribes upon the chart a description of his findings and concludes with the statement that he concurs in or disapproves of the operation. The physician in charge then goes forward with the treatment. Often this physician advises the medical administrator of the hospital or its executive committee that he is to perform this operation.

There should be no attempt to cloak the procedure in secrecy. The diagnosis should be plainly inscribed upon the chart and the description of the operation and its scheduling should be routine in every respect. When a physician yields to the temptation to suppress information he immediately throws himself open to suspicion. The hospital must fully safeguard its good name and physicians must hesitate long before performing such an operation. It is not often that conditions justify this treatment.

Should a Superintendent Engage His Subordinates?

This question is asked by a director of nurses in whose hospital the superintendent insists on interviewing and accepting employees for all departments, including pupil nurses.

Such a practice violates every rule of good administration. This disregard for proper procedure is particularly flagrant in the case of accepting pupil nurses. The principle, however, holds good as affecting every departmental head. No person who does not possess the proper requisites to supervise the work of an institutional department efficiently should hold such a position. Moreover, it would be most unfair to require the effective administration of a department and forbid its head the right to select or at least recommend his or her subordinates.

Meddlesome administration is usually the least efficient. Such a practice as is described in this question is certainly conducive to lowered morale and to proper evasion on the part of a departmental director of the responsibility for the conduct of his subordinates.

If the superintendent persists in following this policy he must assume full responsibility for the scientific acts of every hospital worker. A good executive will accept the recommendations of those whom his board has put in authority. An officious, inefficient one will exercise an authority, which is usually short-lived, by demanding that the sole right of selection be left to him. A superintendent who insists on selecting pupil nurses should appear ludicrous.

Should Staff Members Be Charged for Laboratory Work?

Every business activity, no matter of what magnitude, charges off each year considerable sums for advertising purposes. Gratuities are often employed as a method of gaining good will. Staff members profit by their connection with the institution and the latter certainly benefits because of the professional activities of the visiting staff.

If a physician sends his patients to the hospital x-ray department, for example, for needed studies, it seems perfectly reasonable and businesslike for the hospital to frank an x-ray examination of a long bone when the physician unfortunately participates in an automobile accident.

This policy, of course, should be made effective as the result of board action and should be more or less generally applicable to all members of the staff. The bestowal of special favors should be avoided whenever possible. A community physician who refers work to the clinical laboratory of a hospital should be granted the professional favor of having urinalyses and other laboratory work performed gratis when he himself is in need of them. A physician never charges a colleague for the treatment given to him or to his family.

Some institutions include the dependent members of the physician's family on the list for free service; others grant a 50 per cent rebate to them. Whatever the specific arrangement, it appears an act of common sense as well as of justice to the doctor for the hospital either to frank room and laboratory service to him and his family or else to make him a substantial reduction from the customary rate.

Does It Pay the Hospital to Go to Law to Collect Its Bills?

In almost every locality there are persons who continue to impose upon the generosity of the community institution. Frequently the superintendent is personally informed concerning the ability of persons to pay for services they have received from the hospital and yet he hesitates to endeavor to collect bills by legal procedures. Perhaps he is fearful of creating a feeling of hostility toward the hospital.

The executive who believes that he must put forth every effort to retain the good will of the community is correct in his surmise that prosecution of a debtor will create here and there an unfriendly attitude toward his institution. Yet it seems that if the public could be convinced that the payment of a bill can be legally enforced, less difficulty would be experienced. It would not be a good practice, particularly in a small community, to cause the arrest of all those who refuse to meet their just debts, yet many institutions are employing the services of collection agencies, a procedure they are finding financially advantageous.

Care should be exercised in the institution of such legal procedures. No person should be prosecuted unless his failure to meet his obligations to the hospital is unjustifiable from the standpoint of his own financial ability. On the other hand, some impostors can be brought to the leash only by such drastic action. It is the duty of the board of trustees to require all persons who are able to pay for the care received from the hospital to do so.

If you have any questions to ask, the editor will be glad to discuss these in a forthcoming issue

Selecting and Organizing the Medical Staff*

By A. C. BACHMEYER, M.D.
Superintendent, Cincinnati General Hospital, Cincinnati

THE modern hospital is a complex organization consisting of a number of highly specialized units, each having its own functions to perform and each requiring the services of skilled and specially trained personnel. Its development during the past several decades has been in large measure the result of the numerous advances made in the field of medicine and in the allied physical, biologic and social sciences.

These many discoveries and improvements, the introduction of intricate laboratory analyses and of precise methods in diagnosis, the need for special equipment and involved procedures in therapy, have made it impossible for the individual physician to render adequate, competent and complete service in the case of serious or puzzling illness. All of these developments are only auxiliaries which the physician may call upon when the need arises. Though the hospital has become the sole agency in the community through which complete medical service is available at all times, the physician remains and always will be the paramount factor in the care of the patient. As such, he is the most important element in the entire hospital.

Individual Physician No Longer Self-Sufficient

The finest and most modern equipment, the most highly trained and efficient personnel, are valueless in the absence of the professional counsel and direction of the physician or surgeon. The individual physician is no longer self-sufficient in the practice of his profession and must of necessity call upon his associates who are possessed of special skill and knowledge, and upon the services of other highly trained technicians. And as it is the function of the hospital to provide the means whereby proper facilities are made available for adequate medical service in all instances, it is obvious that there must be a coordinated group of medical practitioners associated with every hospital.

In order that such a group may function in the most efficient manner in the interests of the sick and injured, it should contain representatives of the various special fields in medicine and be so organized that their services may be readily obtained and that their counsel and assistance may be available to the authorities in charge of the institution.

Earnest consideration should be given to the selection and organization of the physicians, surgeons and specialists who are to form the medical staff and who are to use the hospital's facilities in their professional practice. One rarely hears a patient speak of "my hospital" but the expression "my doctor" is familiar. For this reason, because of the reputation that its medical staff earns for the hospital, the greatest care should be exercised in the selection of its members.

Fundamental Functions of the Medical Staff

Much might be written of the methods of selection that have been employed. In recent years, particularly in the smaller communities, the local medical society has been helpful in many instances. In larger cities groups of physicians have interested themselves in the establishment of hospitals and have served as the nuclei about which the staffs have been formed. No single method of approach to the problem will be applicable in all instances. Local conditions should be carefully studied for they will usually govern the procedure. The most important factor, however, is that the men selected shall be the best obtainable in the community.

A number of national societies, representing the various medical and surgical specialties have developed regulations and have established examining boards whereby those who are competent may qualify for recognition in their special field. Every hospital should strive to have on its staff, at least among the senior members, those who have thus qualified in the specialties they practice.

The governing body, board of managers, trustees or directors, having final authority over and responsibility for the entire institution should in all instances appoint members of the medical staff. The board should, however, have the advice and counsel of the staff concerning all staff appoint-

*This article is one of the Hospital Organization Series, under the direction of Dr. Winford H. Smith.

ments and the admission of all professional men to practice in the hospital.

The fundamental functions of the medical staff may be listed as follows:

1. The provision and control of professional service in the hospital.
2. The maintenance of proper standards of medical and surgical service so as to give assurance that all patients will receive adequate, competent care and treatment and that the best possible technique will be used in carrying out the diagnostic and therapeutic measures prescribed.
3. The analysis of the results of the medical and surgical work, so as to provide a check upon the performance of all those directly engaged in caring for the patients.
4. The development of regulations pertaining to the granting of medical charity.
5. The conduct of educational activities for the younger members of the staff, the interns, the nurses and the patients.
6. The initiation, support and supervision of investigative studies in clinical problems and research in such other fields as may be undertaken with the facilities available.
7. The formulation of group opinion on professional subjects and of requirements for proper professional service.
8. The giving of advice to the hospital management upon any subject in the interest of the patients or the institution.

Constitution Should Cover Four Main Points

A definite constitution with such by-laws and regulations as may be necessary should be adopted for the guidance of the staff in each institution. The staff should write its own constitution, subject to the final approval of the governing board of the hospital. This constitution should definitely provide for the form of staff organization by prescribing: (1) the methods of selection, appointment, advancement or promotion in rank, and tenure of appointment for all staff members; (2) the method of selection, title, tenure of service for all officers, specifying also their duties and responsibilities; (3) the method of selection, size and function of all regular standing committees and the formation of special committees when required; (4) the various grades of membership and the duties and privileges of each.

No uniform plan of organization will be applicable in all instances. Much will depend upon the size of the institution and its functions.

In the more common schemes of organization the chief medical officer is designated as chairman, dean, president or chief of staff. There are usually a vice chairman and a vice dean. Provision is also made for a secretary. In an increasing number of instances the superintendent of the hospital is being designated as the secretary of the staff. As such he serves as the liaison officer between the staff and the board of management.

In order that there may be orderly arrangement, recognition of ability and service, extension or restriction of privileges and proper disposition of duties, it is necessary that there be various grades of membership. There is little uniformity in American hospitals in the use of the various designations whereby staff rank is denoted. The designations used most frequently are: chief or director of service, associate or assistant chief or director of service, attending or senior attending (visiting) physician or surgeon, associate attending (visiting) physician or surgeon, assistant or junior attending (visiting) physician or surgeon.

Number of Staff Committees Will Vary

Such titles as consulting or emeritus physician or surgeon are usually conferred as an honor and in recognition of years of service, upon members who retire from active duty on the staff.

In many instances the constitution or by-laws make provision for retirement of members from the active staff, upon the attainment of a certain age. The age limits usually encountered range between sixty-two and seventy years.

Appointment as consulting or emeritus does not deprive the one thus honored of the privilege of practice in the institution. Such men often continue to serve as counselors to both the active staff and the governing board.

The number of staff committees will vary according to the size of staff and hospital and the functions performed.

An executive committee is found in almost every staff organization. It is usually composed of the officers and one or two additional members of the staff. Ordinarily this committee transacts staff business in the interim between meetings and on occasions meets with the board of management to discuss professional policies or transmit staff suggestions or requests. Its members usually are appointed to serve in such manner that there is not a complete change in personnel each year, thus ensuring a certain continuity of staff policy.

A board of censors or professional committee is often found. It is usually composed of senior staff members representing the major medical and surgical specialties. This committee passes upon the qualifications of members of the profession seeking to be admitted to practice in the hospital or applying for membership on the staff. It also serves to investigate questions of medical ethics, professional conduct and complaints involving

staff members. Unless so empowered by the board of management, its findings and recommendations are submitted to the staff and ultimately to the board for final action.

A committee on medical records is usually established. It is the duty of this committee to supervise the work of the medical record department of the hospital, to review the records of the patients and to present an analysis of the medical and surgical work to the staff with comments, criticisms and recommendations. Its members must be chosen from those members of the staff who are entirely above suspicion, who are fearless, frank and just, for it may fall to them to call to account any member of the staff whose practice does not conform to the highest professional standards.

Numerous other committees are encountered in staff organizations. Among them may be noted the following: committee on staff meeting programs, interdepartmental relations, interns, nursing school, medical library, laboratory service, special therapy.

The well organized staff, officered by alert, enthusiastic, interested men, in which duties are assigned through active committees to a large number of members, will always be of greatest value to the institution.

The departmentalization of the professional service in the hospital will depend in large part upon the type and size of the institution, its organization and its relation to other medical and social activities. In some hospitals, all the medical specialties will be grouped under "Medicine," surgical specialties under "Surgery" and the laboratory services under "Laboratory." In others, each specialty will be recognized as a separate service or division, so that there may be as many as twenty or more clinical and laboratory divisions.

Staff Members Should Obey Regulations

The separation of specialties and clinical services should be carefully studied and arranged so that staff members will readily confine their activities to those divisions or special services to which they are appointed. Too great a departmentalization may work a hardship upon them or their patients or be of distinct disadvantage to the hospital.

Having determined upon this phase of its organization, however, the staff should require its members to abide by the regulations. Surgeons should not be permitted to attend purely medical cases; obstetricians should be restricted to the practice of obstetrics; internists should not be permitted to perform surgical procedures, and the various specialists should be required to confine their practice to their special fields.

The assignment of patients to the various services should be precisely prescribed in the staff regulations. The admission of patients usually falls to a member of the resident or intern staff and he should be required to follow the definitely prescribed regulations and cautioned not to make exceptions for any member of the staff. Such regulations should also prescribe the procedure to be followed in the admission and assignment of patients brought to the hospital in emergency or otherwise who have no regular physician and who express no preference as to their medical attendant. This is often a difficult problem and the source of discord among staff members. Obviously these regulations require careful consideration so as to assure justice to all concerned, particularly the patient. Favoritism and special privilege in this connection are fraught with grave danger to the equanimity and morale of the medical staff and consequently to the hospital.

Provisions for Teaching Are Necessary

The members of the staff must also recognize the fact that while the hospital is primarily operated as a service institution for the sick and injured, it also has educational functions to perform. Definite provisions should be made in their organizations to assure their participation in these responsibilities. Arrangements should be made that will assure the younger members of the staff ample opportunity to profit by experience and to broaden their professional knowledge. Definite provisions should likewise be made for educational opportunities for the recent graduate or intern. Participation in the teaching of student nurses is also a responsibility that the staff should recognize and should assign to properly qualified individuals.

Staff organizations are classified as open, closed or restricted. In the open staff, physicians and surgeons, who do not hold definite staff appointments, are admitted to practice in the hospital. Frequently they are designated as members of the associate or courtesy staff. In the closed staff only physicians and surgeons who hold regular staff appointments may serve patients in the hospital. Both types of organization are generally recognized and both have their place in hospitals. There are advantages and disadvantages in both forms of organization. Local conditions, usually will indicate which type of organization is most desirable.

The control of the courtesy staff, or of those physicians admitted to practice in the hospital but not regularly appointed to the staff, is often difficult. Definite regulations should be adopted prescribing the method of their admission to practice in the hospital, the extension or restriction of privileges to them and the types of patients whom they may serve. It should be required of them

that they apply for definite privileges, such as the permission to serve private patients who require only the services of an internist, obstetrician, surgeon or particular specialist. Their application should be submitted to the proper committee of the organized staff for investigation and report. The applicant should be required to demonstrate his skill before this committee. His services should then be restricted to the professional activities the staff judges him competent to perform. The committee's findings and recommendations, as accepted or modified by the regular staff, should be transmitted to the board of management for final action. The board should communicate its decision to the applicant. If granted the privilege of practicing in the hospital, complete instructions concerning the privileges granted and the responsibilities the doctor thus assumes should be sent in writing or as published to the applicant, so that there may be no misunderstanding of the provisions of the agreement.

A Democratic Staff Is Best

Policies governing professional service and the functions the institution is to perform should in the final analysis be determined and prescribed by the governing board of the hospital. Such policies and the regulations whereby they may be executed should be clearly stated and published. The governing board should not, however, endeavor to establish them without first consulting the medical staff as to their content. Each member of the staff and every physician admitted to practice in the institution should be fully informed of such policies and regulations. If they accept them it is then incumbent upon them to observe and support them in practice. If they find themselves unwilling to abide by them it is incumbent upon them to say so and to sever their connection with the hospital.

Physicians are often tempted by influential patients, their friends or relatives to secure admission for patients who are excluded from the hospital by regulation. This is often the case in the instance of patients who are noisy, demented, epileptic, senile or who have chronic or communicable diseases. In strict compliance with the regulations and in fairness to the hospital, the physician should frankly discuss the situation with those concerned and should not endeavor to evade his responsibility.

The hospital should keep its staff members fully informed concerning its financial status, its policies, practices and regulations, concerning charges for service and collection of accounts. They will then be able to inform their patients concerning these factors of their hospitalization.

Every endeavor should be made to provide for as democratic an organization of the staff as possible. Wealth, social position, influence, aggressiveness, personality or professional skill should not win for any staff member special favors or unusual privileges. Each applicant for appointment should be required to conform to the same procedure. Definite regulations pertaining to advancement in staff rank should be prescribed and followed. While length of service should be given consideration in promoting a staff member from one grade to another, it should not be overvalued and should not be the sole criterion. Advancement should always be made upon the basis of merit, not upon the basis of size of practice, popularity, number of patients brought to the hospital or any other single factor.

In recent years, when hospitals have been confronted with grave financial difficulties, some governing boards have assumed unwise attitudes toward their medical staffs. They have urged physicians and surgeons to send more patients to the hospital and to advise hospitalization whenever possible. They have granted additional privileges and have shown favoritism to the staff members who had the largest practices; they have sent reports to staff members and associated physicians showing the number of patients each has referred to the hospital and the income accruing to the hospital through their patients.

These are all dangerous practices which eventually will lead to disastrous consequences. Such methods quickly destroy the morale of the staff, lessen the loyalty of its members to the hospital, undermine ethical standards and in the end result in loss to the institution. The members of the staff should not be regarded as business getters or sales agents for the hospital under any circumstances.

Multiple Staff Appointments Lead to Trouble

Another practice that should be condemned is the ready offer of a staff appointment to busy practitioners who are members of other hospital staffs in the hope that they will divert some of their patients because of such appointment. This creates unfair competition between hospitals and breeds bad feeling. Multiplicity of staff appointments interferes with undivided loyalty to any single institution and makes impossible the giving of proper attention to his responsibilities by any staff member in any of the hospitals with which he is connected. In most communities there are enough competent physicians so that multiple staff appointments are not necessary. If multiple appointments were entirely eliminated, both the profession and the hospitals would benefit. This is especially true in connection with open hospitals, where staff appointments are not essential for practicing in the institution.

What Good Are Fire Exits If You Can't Use Them?

By
PAUL W. KEARNEY
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International News Photos, Inc.

EXITS at once come to mind when the subject of hospital fires is discussed. While many institutions are undeniably below standard in this detail, the fact remains that safe egress involves many more factors than mere fire escape doors. Even when these facilities are theoretically adequate, the behavior of fire in many cases causes them to fail.

Appreciation of this must be based on the fundamental fact that fire generates heat, and heat rises. The typical hospital is a building of large areas, honeycombed from basement to roof by numerous vertical arteries such as stair wells, elevator shafts, ventilating systems, laundry chutes and less obvious flues like hidden pipe recesses or hollow walls.

When a hostile fire burns undetected, its heat—and the term "heat" includes several combustion gases more deadly than carbon monoxide—follows its natural tendency to rise to the highest level. Blocked by the first ceiling, it runs laterally along that to some new artery that will carry it higher, and thus it quickly progresses and in a short time floods an unprotected structure.

At first, of course, this heat is little more than 100° F., but as the blaze progresses and the intensity of the fire mounts, the rising fumes reach 300°, 700° or 1,000°. At those various points combustible materials in the path ignite. First to go are the flimsy things like curtains, window shades and draperies. Then furniture and finally even the heavy woodwork begin to burn. The upshot is that an uncontrolled fire in the basement starts additional fires in whatever upper portions of the building its pent-up heat can reach. When one has seen a small outbreak on the main floor of a five-story brick structure burn right through the roof

in fifteen minutes, it becomes apparent that little time is required for a blaze to "mushroom" through a building.

Upper areas naturally become untenable some time before they are actually involved by fire. Air at 500°, when it contains varying concentrations of nitrogen oxide, sulphur dioxide, hydrocyanic acid and other typical fire gases, becomes deadly on multiple counts and a breath or two of it in the hall will render useless the most capacious exit.

Since fires will occur despite precautions, the only practical advice that can be offered is, Don't let the fire get away! The path toward that goal covers two routes—(1) structural confinement and (2) automatic control.

Heating Plants Cause Most Fires

Where thoroughgoing fire resistant construction is impractical, as in an existing building, it becomes vital to provide means for confining an outbreak to the smallest possible area. The first step is to isolate the basement, especially the furnace room or boiler room, from the rest of the structure by covering walls and ceilings with a heavy coating of some material that will retard fire for at least one hour. Most hospital outbreaks occur in connection with heating plants or their tributary pipes and flues and too much emphasis cannot be placed upon the necessity for cutting off this area from the building proper.

Extra precautions must also be taken with all vertical arteries leading upward from the basement. Stairways should be completely enclosed in rigid partitions not less than three inches thick, constructed of some incombustible material such as brick, gypsum block, hollow tile or solid metal lath and plaster. All doors should be metal or metal covered, in frames of similar material, and should be self-closing. Where glass is necessary, it should be wired glass in metal frames.

These same precautions apply to elevator shafts, dumb-waiter shafts and all other openings that may serve as flues for a sweeping fire. The more secluded arteries like chutes and ventilator ducts require sturdy fire doors, preferably equipped with fusible links that will automatically close them in the face of rising heat. Many an otherwise good building has been wrecked by heat communicated through these openings. The unfortunate Cleveland Clinic disaster which occurred in 1929, offers gruesome evidence of the life hazard from fumes spreading through the ventilating system.

Probably next in importance to these main vertical arteries are the horizontal cut-offs of the floors. Most hospitals have expansive unbroken floor areas that make it possible for a fire to take control of an entire story in a minute or two. The only safeguard is the strategically located fire wall that divides each floor into individual zones or units. Equipped with automatic fire doors, these walls afford one of the most practical and effective means of escape from fire in an institution—the horizontal exit. If the building is properly protected otherwise, patients can be wheeled from the danger zone into a safety zone without resorting to stairs or elevators. And even if further evacuation of the building is necessary, it need not be as frantic as it must be in a wide open structure.

Smaller vertical arteries—notably pipe recesses—should be cut off at each floor level. Even bare pipes running through ceilings should be suitably fire stopped by properly installed tight fitting metal rings. Rising heat will negotiate the most minute crack.

This same cut-off principle applies to all floor and ceiling levels, particularly in a building with hollow walls. Unless fire stopping at these points is provided, once the heat from an outbreak penetrates the shell the structure will soon be ablaze from cellar to attic in an area that is practically inaccessible. Complete specifications for such protection can be obtained from the National Fire Protection Association, Boston, or the National Board of Fire Underwriters, New York City.

The only major structural remedy for the combustible building is to reduce its areas to a minimum of size and to create a maximum number of independent units. While this applies especially with regard to vertical units, yet it is hardly less important with regard to horizontal areas. Assuming that fire will break out despite all normal precautions, the first essential is to confine the outbreak to its point of origin instead of permitting it to sweep through the entire building before it is discovered. Standard fire stops are those which will accomplish that for at least one hour.

Automatic Control Is Absolutely Necessary

The second expedient—and it becomes paramount where the first is financially difficult—is automatic control. It goes without saying that high hazard areas like the basement should be protected by automatic sprinklers which, in turn, should be electrically supervised. Not even the most parsimonious official has yet been able to think up a valid alibi for the absence of this safeguard from the basement of a combustible institution, but there are thousands of buildings without them.

In other sections where an immediate water flow would not be judicious, automatic detection or alarm systems should take the place of the sprinkler. There is available a variety of such systems approved by the Underwriters Labora-

The real force behind an automatic protection system—the never sleeping central station where operators watch during every minute of the day and night for fire alarms and other signals indicating that emergency action is necessary.

tories. Such a system not only detects an outbreak in its incipiency (around 135°) and reports its exact location, but it also performs such important duties as closing fire doors and windows, shutting off fans and turning on emergency lighting units.

These detection and alarm devices are either thermostatic or pneumatic in operation. The former employs either spot thermostats situated at strategic points or, preferably, continuous lengths of fire wire that run around the ceilings where heat first strikes. The wire will fuse when a dangerous temperature is reached. This actuates the alarm and also indicates the location of the incipient blaze on conveniently placed panel boards.

This is known as the "fixed temperature plan." The fire detecting element must be heated by the surrounding air to a predetermined point, ranging from 120° to 180° depending upon the location, before the alarm will function. Naturally such a temperature bespeaks a small outbreak that can be easily handled.

In contrast to this, the pneumatic system operates on the so-called "rate of rise" principle. That is, no dangerous point is predetermined. The system will function upon any sudden rise from the prevailing room temperature, whether in the boiler room or the refrigeration room. Instead of a fusible metal, this system utilizes fine copper tubing about one-twelfth of an inch in diameter. The air in this tube is at atmospheric pressure. It is expanded by heat rising from a slight outbreak. The expansion forces the air out of its narrow confines and in its escape it presses against metallic diaphragms, closing an electrical circuit and actuating the alarm. This type of system was recently installed in all municipal hospitals and institutions in St. Louis.

Whichever type of alarm is considered, the vital factor is its maintenance. Approved devices for hospitals must be self-supervising, that is, they must be equipped to sound automatic trouble signals in case the system becomes temporarily inoperative from any cause. Obviously, any protection which can "go dead" without warning sets up a serious condition of false security.

A double safeguard is provided when such a system functions through an outside central station as well as through an internal panel board.

The central station provides continuous electrical supervision as well as proper maintenance service and is far superior to the haphazard attentions of the house electrician.

This outside check-up is likewise invaluable in the event of a fire alarm. Persons unfamiliar with the swift action and treachery of fire too often do the wrong thing even when notified in ample time. The records are full of cases where buildings have been destroyed by fires that could have been extinguished when discovered if a pail of water had been applied. For this reason alarms transmitted to a central station are instantly relayed to the fire department so that professional aid will be immediately forthcoming.

This discussion of automatic control simmers down to the fireman's maxim, "The first five minutes are worth the next five hours." In a combustible building lacking the elements of structural confinement, automatic control extends far beyond mere desirability and becomes a necessity. Failure to provide it in a hospital is plain criminal negligence.

Virtually every serious blaze can be attributed to belated discovery. Fires all start small. They don't remain small because the numerous available paths of extension allow withering heat and lethal gases to permeate the entire structure. The remedy must come within the first five minutes and hence automatic control is indicated.

The same principle applies to the fire resistant building and the old-fashioned fire trap. Naturally, the margin of safety in the former is infinitely greater, escape is simpler and extension of the fire is more difficult. Stone and steel walls cannot make a building any more fireproof than its contents, and if those contents burn unheeded for a nominal period, they will generate sufficient heat to cause severe damage if not to weaken the structural elements beyond repair.

So far as the life hazard is concerned, the human being is always in jeopardy no matter what happens to the building. The Cleveland Clinic, an excellent piece of construction, withstood the explosion commendably. But failure to protect the ventilating system, which spread the fumes everywhere, and to provide automatic cellar sprinklers resulted in a condition that spelled the doom of 125 occupants of the building.

Obviously, automatic control is essential in the good building as well as in the bad one. When so many buildings are antiquated, mechanical protection becomes a crying need that is seldom crystallized into mandatory laws until a catastrophe emphasizes the prevailing conditions.

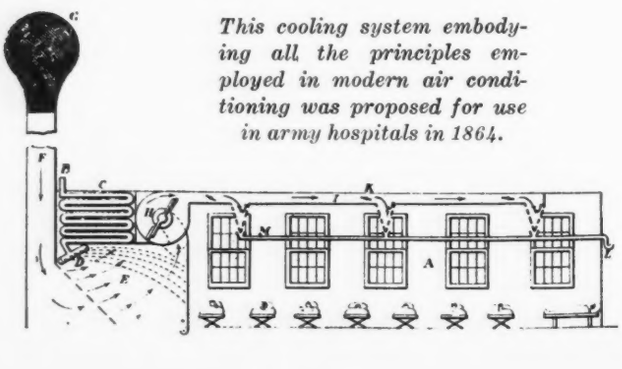
Prudent men need not wait for a catastrophe. Modernization of buildings is more urgent and more feasible now than ever. The availability of federal funds and the increased income from other sources will prove godsends to many a superintendent who has been watching his structures run down for five years. Those institutions that are up to par in other respects but deficient in fire protection now find the monetary obstacle removed.

In view of the present opportunity, it behooves every hospital administrator to call in a qualified fire protection engineer who can intelligently inspect his institution and point out the defects.

Air Conditioning Systems Proposed a Generation Ago

While the science of air conditioning may properly be regarded as a development of recent years, its fundamental principles are by no means new. A system embodying all the principles employed in modern air conditioning was proposed for use in army hospitals in 1864.

The designer of this proposed system for the air conditioning of army hospitals, a description of which appeared in the Scientific American under date of July 4, 1864, was one George H. Knight of Cincinnati.



This cooling system embodying all the principles employed in modern air conditioning was proposed for use in army hospitals in 1864.

The system, conceived and recorded almost seventy years ago, embodied every one of the elements of a modern air conditioning system. There was an outside air connection for the intake of fresh air; a washing chamber where this air could be cooled and cleansed by pure cold water, which in turn was refrigerated in a separate cycle, by means of a mixture of ice and salt, corresponding to the modern brine cooling system. There was also an air distributing system to carry this clean, cool air into the hospital room and its volume could be regulated by a damper under the control of the surgeon.

The author of the article pointed out that the system could be readily combined with warming and ventilating apparatus for use in the winter season. He suggested that by rendering the water slightly saline it could be brought to a temperature of 30° F. without "congealing" and would also exercise an antiseptic influence. He recommended sea water for use with the system, or, as second choice, spring water, and further pointed out that the effect of the process would be to precipitate all dust and impurities mechanically suspended in the air.

Eighteen Months' Operation Proves Value of This Group Plan

By R. D. BRISBANE
Superintendent, Sutter Hospital, Sacramento, Calif.

HOSPITAL associations are not new to California. The first mutual associations, providing both hospital and medical service, were established in San Francisco near the middle of the nineteenth century.

Economic conditions and the success attending the group hospitalization plan used at Baylor University Hospital, Dallas, Tex., resulted in the establishment of numerous organizations of this type. Among these was the Superior California Hospital Association. The word "Superior" designates the topographical situation of the northern part of the state—not its feeling of superiority over Southern California or Los Angeles.

Tacit approval of the proposed plan was obtained from the county organizations of physicians, dentists and nurses and representatives of these groups and representatives of Mater Misericordia Hospital and Sutter Hospital, Sacramento, met on June 15, 1932. The organization was officially named at this meeting and a contract for membership was made with a group of employees of Sutter Hospital. A short time later Woodland Hospital and Clinic joined the association, followed by five smaller hospitals. This gave coverage in the Sacramento Valley from the Oregon border on the north to Stockton and San Francisco Bay on the south, a territory about 400 miles long and 100 miles wide.

Professional Sponsorship Has Been Sales Help

The outstanding feature of the Sacramento Plan is its sponsorship by the professional groups enumerated, which has been a great help in selling the plan. Endorsement by the various chambers of commerce in the territory was possible only because the association was a community enterprise. The cooperation of business firms and their executives followed as a matter of course.

Unlimited advertising of regular physicians, dentists, nurses and accredited hospitals is perfectly ethical in support of the association. In this manner the public is taught to respect and patronize regularly constituted agencies instead of irregular ones and those organized for profit.

Benefits under the Sacramento Plan are practically the same as those granted by similar associations. Accidental injuries are cared for after the day of membership; medical illness, like pneumonia, is cared for after twenty days of membership; major and minor operations are performed six months after joining, provided symptoms were not present previous to membership. Up to twenty-one days of hospitalization are provided for any one case of injury or illness in a twelve-month period.

Maternity and gynecologic cases, hernia, removal of tonsils and adenoids, and teeth extractions requiring general anesthesia, are hospitalized only after a year's membership.

Attempt Is Made to Keep Costs Low

X-ray and laboratory examinations that may be performed in physicians' private laboratories are not included under the association's benefits, in order that the hospitals will not compete with private practice. One cystoscopy is permitted each year, and also one blood transfusion, if necessary. The above restrictions are designed to keep costs as low as possible, in order that the association may care for as many persons as possible.

A medical examination is not required of prospective members, but if a complication is stated on the application the attending physician is consulted as to the risk of accepting the applicant. The fact that the county medical society is a cosponsor of the association is helpful when the doctor's cooperation is needed.

It is not intended that hospitals and other groups that sponsor the enterprise shall build up distant communities at their own expense; hence only two weeks is allowed a member who requires hospitalization in another city.

Semiprivate or two-bed rooms are allowed beneficiaries, and private accommodations may be obtained by any member by payment of $1 a day extra. The hospital receives $4.50 a day from the asscciation for these services. They are paid industrial rates on x-rays.

Age limits are from one to fifty-five years, ex-

cept for groups. The age limit is waived for any group of ten or more persons, and their families, who work for the same employer. Groups of ten persons or fewer must be of an average age of forty-five years or under.

Dues are $1 a month for each person, and in addition there is a membership fee of $1 for individuals or families outside of groups, as the risk is greater and the extra fee helps to provide against the additional expense. Dues are payable every three months, except for groups. This system reduces collection expense for the association and shortens the length of liability in case the member is undesirable.

Cash Reserve Maintained for Emergencies

Only legally qualified physicians and dentists are allowed to treat association members. Another special feature of the Superior California Hospital Association is an emergency cash reserve of $3 for each subscriber. In other words, with 3,000 members, the association is required to have $9,000 cash in the bank as a safeguard against unforeseen epidemics or catastrophes. I believe this is a safeguard that should be imposed on all associations of this character.

The following statistics are based on the first eighteen months' operation of the association. They may be helpful to similar organizations.

Total receipts for the period were $25,626, of which 60 per cent was set aside arbitrarily for claims and 40 per cent for expenses. Approximately half of the 60 per cent was used to pay hospital bills; the other half was banked in the reserve fund.

The 40 per cent for expenses was kept within bounds, despite the fact that commissions of $2.50 were paid salesmen for each membership obtained, and printing and office expenses naturally were somewhat higher than they will be in succeeding years in proportion to membership. In the future, not more than 25 per cent of the income should be used for expenses.

Groups, such as state employees, teachers, nurses, clerks and trades, together with the individuals written from a cross section of the city's population, averaged only 6 per cent illness during the first year, or 9 per cent for the first eighteen months of operation.

A total of 198 persons spent 1,244 days in the hospitals during the first eighteen months of operation. The average stay was a little more than six days, which made the average bill $48.35, or $7.98 a day.

An average of five salesmen were employed during the past year.

Applications, certificates of membership, and other literature published by the association are printed on yellow paper with dark green ink. Yellow cardboard posters printed in green and red ink were placed in all prominent stores of the city a month before Christmas. The poster suggested a gift membership for friends. Although the posters competed with the merchandise on display, the large department stores cooperated fully by placing the posters in prominent positions. The response in new members was highly satisfactory.

At the end of the first eighteen months 2,500 members were enrolled and fully paid. This represents an average monthly gain of 140 members for the period.

Because Sacramento is not a large manufacturing center it was impossible to follow the Baylor Plan of restricting membership to employed groups. Consequently, it was necessary to devise a rather complicated system of sales and collections, which required a considerable amount of preliminary work. A dozen or more visits were made to certain business executives—petty, pompous and otherwise—before they were assured that the plan was not just another racket against which they should protect their employees. Hospital associations, even of the best character, can be established under such conditions only through hard work, and a liberal quantity of patience and education for all concerned.

Interest in the Sacramento Plan has been widespread and more than 200 inquiries have been received from various sections of the United States. The association is glad to answer all inquiries, but it would appreciate return postage because even postage stamps are an item that must be watched.

All Groups Must Work Together

The attorney general of California has just ruled that all organizations of this type will hereafter be considered the same as an insurance company, and must be bonded, licensed and otherwise regulated. This is a good measure because of the many insecure commercial associations that have been mulcting the public and then moving on to more profitable fields.

Our experience has convinced us that an association of this type must have adequate representation from all interested groups on its board of control if it is to be successful. This is not a task for physicians or hospitals alone. Both groups should join together and should enlist the aid of as many other groups as possible. Adequate financial reserves and cautious policies in management will produce the economic assistance desired for the public, the hospital and all others who will benefit by this simple method of budgeting hospital bills.

Hospitals Can Do Something About the Weather

It has been discovered that remarkable relationships exist between weather and disease. This knowledge has deep significance for hospitals since it indicates the necessity for greater artificial control of indoor temperature

By C. A. MILLS, M.D.
Professor of Experimental Medicine,
University of Cincinnati

PROTRACTED high temperatures, particularly in association with high humidity, produce lowering of the general metabolic tone and energy level in the body, and with this there comes a sudden drop in resistance to infection. Acute appendicitis, for example, shows a tendency to occur most frequently where storm temperature changes are widest, and to be most deadly during summer heat waves.

The fatality rate for the disease is highest in the Gulf states (13 per cent) and diminishes steadily toward the north (5.2 per cent in Canada). It is also highest in the North during summer heat waves. At these times the attacks are almost epidemic in character, perforation and spreading peritonitis frequently occurring within a few hours after the onset. Resistance to infection seems low at such times and operative risks are greater, but it would in many cases be dangerous to postpone operation until cooler weather.

A hospital is failing to provide the best chance of recovery for its patients if it permits them to be operated on in hot operating rooms and subsequently allows them to occupy hot rooms. Cooling by fans is not advisable because of the danger of postoperative pneumonia. It seems, therefore, that hospitals situated in areas where heat waves occur should provide cooling facilities to obviate the depressing effects of heat on patients. In treating cases of arteriosclerosis, diabetes and toxic goiter summer heat is beneficial, while in practically all infectious cases it is harmful.

The Best Plan for Existing Hospitals

Practically all hospitals in the North need cooling facilities during brief periods in the summer, while in the South cooling systems could be used to advantage from May to October. Throughout the orient and the tropics recovery from serious illness or major surgical operation is slow even with the best of hospital care. This, I believe, is due to the depressing effect of the long summer of moist heat on body metabolism. By properly controlling indoor hospital environment during periods of moist heat, bodily vigor could be increased and more rapid convalescence could be obtained.

Care must be exercised, however, to avoid chilling and respiratory infection, for it must be borne in mind that the entire resistance of the individual is at low ebb and that he becomes chilled more easily than he does in winter. A temperature of about 15° F. below the outdoor temperature will probably be found most beneficial.

Air conditioning in hospitals already constructed is an expensive matter. It could probably be handled best on the small unit or room plan. In planning future buildings careful consideration should be given to this question and provision should be made for as complete control over indoor atmosphere as it is possible to attain. Recent developments in insulating materials, double or triple glazing in windows, and other details designed to aid in tempering indoor atmosphere will prove valuable in the future handling of patients.

Before many years medical practice probably will devote considerable attention to the effects of environmental conditions, and it behooves hospital boards considering new construction to make this preparation for the future at a time when it can be attained with least expense.

Another point that should not be overlooked in construction is proper acoustic treatment. Every effort should be made to reduce irritation of patients lying in hospital beds, and elimination of discordant noise and echo is second only to good nursing care in this respect. Cost is relatively low if installation is made when the hospital is built.

Mention should be made also of a point that is

still rather nebulous. Evidence that is beginning to accumulate shows that disturbing action results from sudden and severe drops in barometric pressure. With these severe fluctuations certain fundamental changes seem to take place in human tissues —changes that may be found to play an important part in the causation of many body disturbances. There are indications that acute appendicitis attacks and the occurrence of suicides and homicides are related to these fluctuations.

As soon as construction and air conditioning engineers are prepared, I believe it would be advisable to consider means of eliminating these pressure drops within hospital buildings. Such a step would be fairly simple in cases where construction provides maximum insulation against outside temperature changes.

One of the greatest enemies of health in the central trough of the North American continent is the great weather variability, with wide and frequent storm changes in temperature and barometric pressure. To be sure, these changes give us our high energy level and vitality. But they seem to bring us also a host of respiratory troubles and a great many other health disturbances. Perhaps when indoor air conditioning has been brought down to a less expensive level, we can obviate evil storm effects and still retain our high energy level.

The South is more fortunate so far as storm disturbances of health are concerned. With summer cooling to raise energy to a more productive level, that section would be in an enviable situation.

Hospital boards, in planning future construction, would be wise to seek the greatest possible control of indoor environment. Savings in power plant and fuel costs will offset most of the added outlay required to construct and install such complete control, and provision will be made for future developments in the treatment of disease.

Hospitals have as their clientele persons who are most sensitive to discomfort and whose welfare depends, often in a considerable measure, on the elimination of irritating factors, either mental or physical. If hospitals are to give maximum service, they should go as far as possible in such matters as sound deadening and air conditioning.

A Picture-Book on Medical Costs of Sickness

"The poor fellow lying on his back in bed represents the unlucky one out of fifteen whom illness compels to go to a hospital for care. But look at the 'pie' below, divided into two equal slices! This represents the striking fact that the costs of these relatively few hospitalized illnesses amount to half of what families spend for the care of all illness.

"About two-fifths of the expense is the hospital's charges; about half goes to the surgeons and physicians; the small remainder goes to the special nurses and for incidentals."

Hospitalized Illness
STRIKES ONLY ONE PERSON IN 15 PER YEAR
BUT IT COSTS
HALF OF ALL FAMILY EXPENDITURES FOR ILLNESS
Hospitalized Illness
All Other Illness

In such simple text and diagrams does a recent pamphlet of the Julius Rosenwald Fund tell the public about medical costs.

"A Picture-Book About the Costs of Medical Care" is the title of the booklet. Permission is given to reproduce any of the charts or facts in the booklet, and the fund promises to supply information, on request, as to the sources from which the facts used as the basis for the pamphlet were derived.

For hospital and nursing school bulletins, as well as for promotion material going out from the hospital, these simple lively drawings are excellent attention-getters. They reproduce cheaply and reduce to a given size clearly. Administrators may wish to call the charts to the attention of their local newspaper editors in the hope that they may be given wider distribution than the hospital can give them.

The pamphlet was published because of the demand for popular information about the costs of medical care.

How Large Business Groups Control Charitable Donations

The care with which large business enterprises determine their policies regarding charitable donations is shown in a recent article by Col. C. O. Sherrill, vice president, Kroger Grocery and Baking Company. "Branch managers may donate a reasonable sum to local community chests or any other centralized charity in each community within which the branch operates," Colonel Sherrill states. "An effort is made to assure that donations are apportioned equitably to all communities in which the branch is operating in proportion to the number of stores in each community. Such contributions may be given entirely in cash or partly in food.

"Having made a donation to the community chest or other centralized charity organization, the branch manager is not authorized to make any additional donations to any organization or agency which normally receives support from the community chest or similar centralized organization. Suitable donations may be made to hospitals or other strictly charitable agencies not included in centralized charity organizations."

Lawrence Hospital Is Essentially a Human Institution

By RAYMOND P. SLOAN
Associate Editor, The MODERN HOSPITAL

THREE-QUARTERS of an hour from New York City, in that section known as Westchester, is the residential suburban town of Bronxville. Imposing stone residences of successful New York bankers, lawyers and business leaders rise majestically from the heavily wooded slopes of the Westchester hills.

A pretentious residential hotel, perched on a high bluff, looks down upon tempting specialty shops, gift rooms and flower stores before which lines of luxurious limousines move slowly up and down the town's main thoroughfare. Dotted here and there on rolling green meadowlands are impressive country clubs, the scenes of card parties, teas, dances and all the social activities that typify modern suburban life.

Some twenty-five years ago through the generosity of William Van Duser Lawrence there was founded in the very heart of the town and just a stone's throw from the railroad station, Lawrence Hospital, an institution which today has a bed capacity of 105. The low, attractively simple main building, with wings on either side to give it a rambling effect, has imprinted itself in the subconscious mind of every man, woman and child who hastens to and from the electric trains that run into New York. It is a daily reminder of what modern hospitalization means to the neighborhood.

During the intervening years additional buildings have been added to the original structure. A large new wing, containing suites of private rooms and floors on which are wards, with spacious sun rooms on the ends, extends along one side of the property and back into the rear. Only a short time ago a nurses' home was erected. It is ideally situated on the part of the plot that faces directly on a business street and is so designed that a row of stores on the street level brings in a substantial revenue at no sacrifice to comfort. The other side of the building looks down on a picturesque ravine in the rear of the hospital property.

In a long wing on the second floor is the private well appointed suite of the superintendent. The living room of her apartment is decorated in neutral tints and gold. Generally the superintendent's quarters are indeed strictly private but Miss Ray-

mond has chosen to make of her artistic rooms a haven for the tired and the heavy laden. Relatives worrying for the safety of a loved one left in the hospital for care are comforted with sympathy, and with a cup of tea or coffee, and they go away with a less dismal outlook upon life. There are joyous gatherings, too, and the gay as well as the unhappy of spirit meet in the cordial atmosphere and find pleasure in an unfailing hospitality.

Generally in the history of organizations and individuals alike, certain definite turning points are to be found. Cycles come and go, some characterized by successful achievement, others marked by disappointment and frustration. Some seven years ago a change of management marked the beginning of a new cycle in the progress of Lawrence Hospital—a cycle distinguished by modernization activities and a public relations program that have contributed toward establishing the institution in the prominent position it holds today in the social life of the community.

Modernization activities started shortly after Miss Raymond assumed charge. They were prompted by a request from the board of managers for a report on changes or improvements that seemed advisable to meet new trends. Years of experience in hospital work with Herman Knapp Memorial Eye Hospital, New York City; Marietta Phelps Hospital, Macomb, Ill.; Toledo City Hospital, and various other institutions made Miss Raymond sure of her ground, however, and she stood firm for certain changes, for example, better housing facilities for her nurses.

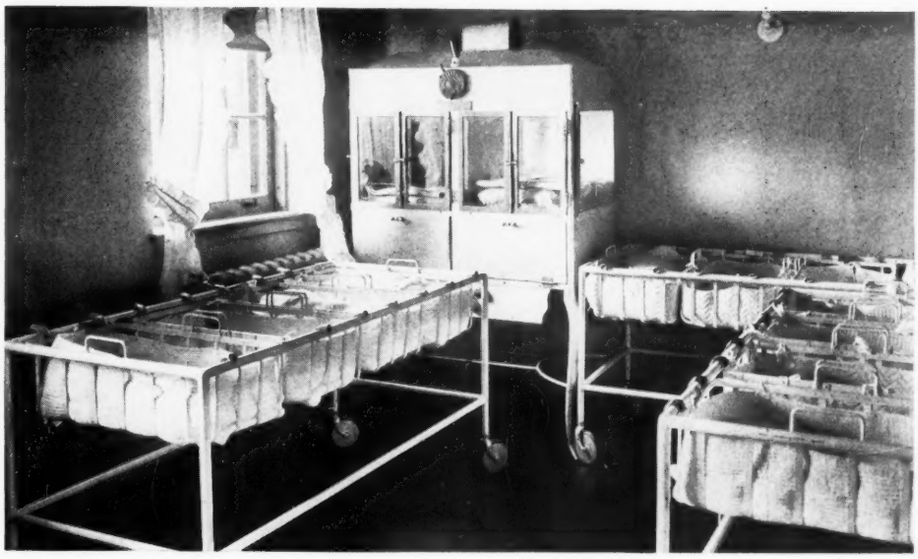
Those first days that marked a new era for Lawrence Hospital were perplexing ones for all concerned. All the while, however, Miss Raymond and her board were becoming better acquainted and a relationship was being formed that has since ripened into a friendship and understanding unique in hospital history.

This month the Little Journey takes us to a totally different type of hospital from The House on the Hill visited in February and the little log cabin hospital described in March. This time it is a community hospital in Bronxville, a residential suburb of New York City, where Rowena H. Raymond, through personality combined with executive ability, has helped to make Lawrence Hospital a powerful factor in the social life of the community

The public relations program has never been a program in the true sense of the word. It began that day when Miss Raymond was first called in to meet with her board. There has never been a day since when it has not been part of the hospital routine. Without doubt the most effective type of public relations work, it is nevertheless the most intangible and difficult to describe in that it is based largely on personality.

Miss Raymond is more than superintendent of Lawrence Hospital. As hostess to patients, visitors, board members and friends of the institution in Bronxville and in neighboring towns, she has succeeded in making the community hospital-conscious. No hostess greets her guests with truer hospitality, whether they be influential members of the board or sorrowing friends of a free

View of the laboratory. The room in the rear is used for tissue work and also for sterilizing.



This is a section of the nursery, showing the incubator and several bassinets.

patient in the wards. No hospital executive has any more accurate knowledge than she has of what is happening within the institution's walls at every minute of the day or night.

A story proudly related by a member of Miss Raymond's staff illustrates this point. One evening she was entertaining some friends at dinner. During the course of the meal a message was received that a critical emergency operation had to be performed and that it demanded the services of everyone available. At the same time an ambulance call came in. Who was to ride the ambulance? There was no question in Miss Raymond's mind. She slipped on a topcoat and went with the ambulance.

Visits Each Patient Every Morning

The call had come from Tuckahoe, a larger town a few miles away, from which the hospital draws many ward and free cases. It was necessary to inquire the way so a stop was made at the fire department, of which Miss Raymond is an honorary member. A more surprised fire chief would be hard to find than the man who greeted this hospital woman. The head of Lawrence Hospital riding the ambulance!

Then, the story goes, the destination was reached—a little shack of a house in the Italian district, but somebody's home, the lights and movement reflecting anxiety to a group of friends waiting outside. Miss Raymond entered and found herself in the arms of a huge Italian woman, kissed on both cheeks and greeted in effusive delight: "You! Miss Raymond! You ride the ambulance to come to my daughter! Now I know everything will be all right!"

Can the life of a busy hospital executive be so interrupted with outside activities without some sacrifice to operating routine? This question can best be answered by another: Can the executive officer of a community hospital carry on efficiently without entering the life of the people and making them hospital-conscious?

Miss Raymond's public relations work starts each morning with a tour of the hospital. She visits and chats for a minute with every patient, whether he occupies the most expensive private suite or a bed in the wards for which he pays nothing at all. Patients appreciate being called by name and being asked about their condition. The superintendent checks up personally to see that each one is receiving every possible attention.

Then follows the usual busy day of the hospital superintendent, often complicated by calls that are not in the usual routine. In the course of a hard afternoon in her office Miss Raymond will drop everything and rush to the children's ward to be the guest of honor at some youngster's birthday party. That they feel she adds to the gaiety of the occasion is a tribute to her happy nature and bright influence.

General Public Is Interested in the Hospital

A late afternoon train will often bring a director with an idea for conference or to arrange a special board meeting. And these meetings also make demands upon the superintendent. She finds it an important factor in the work to be requested to address a gathering and to give some intimate resumé of the hospital program. It is one of her maxims that she must take advantage of every opportunity to make friends for the hospital.

Emphasis is placed upon the public relations work for which Miss Raymond is so well known because without it the modernization program that has kept Lawrence Hospital in the front ranks of well equipped institutions would have been impossible. The hospital is supported, in addition to the revenue obtained from an endowment fund, by benefits received through a community chest drive conducted each year for three major local charities. That the general public is interested in the hospi-

Ample sunlight and orderly arrangement of the furniture are found in the women's ward (above). Below is the doctor's rest room on the maternity floor, which is comfortably furnished. On the opposite page is the nurses' lounge, with its fireplace and attractive furnishings.

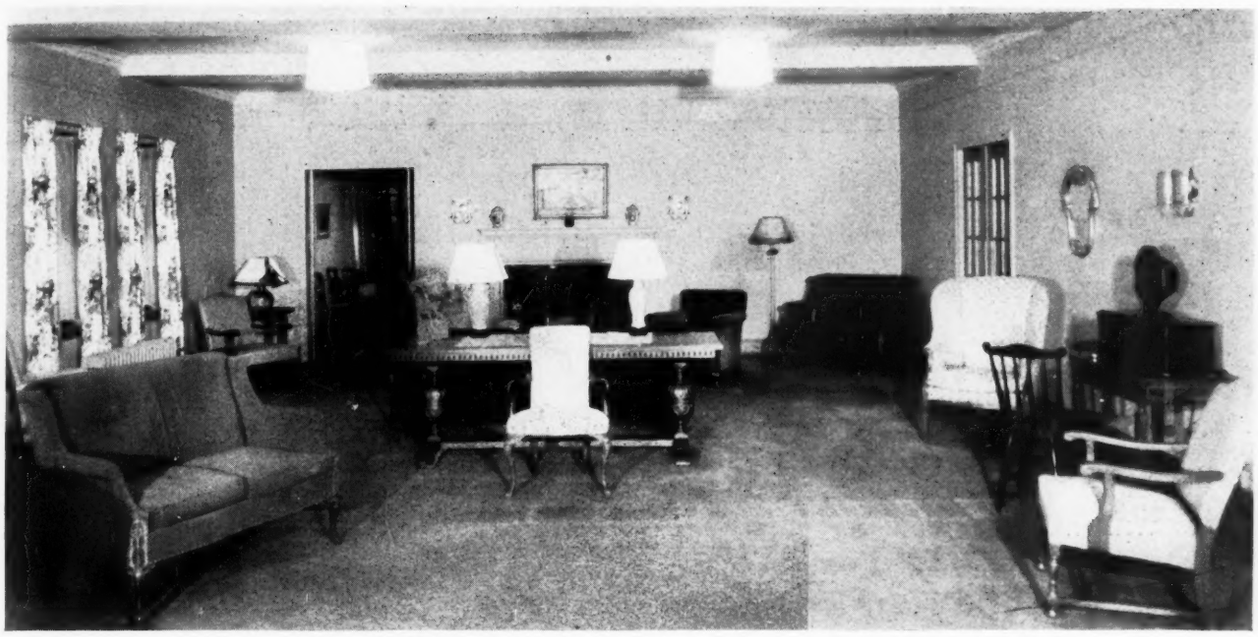
tal's activities is evident from the contributions made to this fund. The close relationships Miss Raymond has been able to maintain with substantial individuals have brought the institution numerous extra gifts.

Aside from the nurses' home, which was described in detail in the February, 1930, issue of The MODERN HOSPITAL, at the time of its erection, and the new wing already referred to, improvements have for the most part taken the form of minor changes. These are being made constantly, in line with modern hospital practice.

Under Miss Raymond's supervision private rooms have been transformed through decorative additions of warm tones, gay chintz hangings and harmonious bed coverings into a near approach to a home setting. Wooden floors and stairways have been covered with linoleum and wards have been brightened with color treatment. To ensure a degree of privacy, cubicle curtains hung from heavy rods can be drawn around each bed. On the walls of the children's ward are paintings of familiar fairy tale friends.

In the maternity section a door leading from the hallway into the nursery has been cut down to form a window with a shelf. This window, completely surrounded by a cubicle curtain, makes an enclosure into which the doctor steps to examine some particular infant that the nurse has placed upon the window shelf for his attention.

When the new wing was built space at the intersection of corridors was utilized for hallway lounges. In these spaces are placed attractive upholstered chairs and tables with lamps that diffuse soft light. These lounges make bright little oases



to relieve the hospital's severity. The same artistic touch applied to the numerous sun rooms and outside porches, to say nothing of the commodious quarters in the nurses' home, invest them with the atmosphere of a comfortable country home.

That little improvements are always being made became evident upon a recent tour of inspection of the building made in company with Miss Raymond. The section containing the operating room had been reached. The supervising nurse called Miss Raymond's attention to the brass plate that had been placed along the bottom of the door. "You have no idea what a difference it makes," she said. "Before it was there the doctors kicked the door as they opened it, which made it almost impossible to keep the door clean and in good condition."

The inspection party finally came to rest in the suite of their hostess and there they witnessed a pleasing incident. A nurse entered carrying two oranges and with a broad smile announced that they had been sent to Miss Raymond by a ward patient who having learned that the superintendent had been unable to visit the ward because of a cold, wished to share with her the fruit that had been a gift to the patient.

A woman who is prominent in Bronxville charities and who has been president of the women's auxiliary of the hospital for several years, was visiting Miss Raymond at the time. "That's nothing," she said. "Tokens of affection and esteem from grateful patients are common enough to Miss Raymond." And exactly at the psychological moment came a knock at the door. A box of flowers. Miss Raymond opened the box and read the card and in her characteristic quiet manner observed: "Now isn't that sweet of her." This gift was from a more affluent patient who, discharged the day before, sent flowers to express her appreciation of many courtesies shown her by the superintendent.

Call it personality or call it a public relations program if you will, but whatever this particular superintendent possesses, it is a big asset to the hospital. It is the quality that draws patients, from the village or from outside, to Lawrence Hospital, giving it preference over bigger and more widely known institutions of New York City.

A Code for Laboratories and Its Provisions

A code for clinical and x-ray laboratories has been prepared ostensibly under the National Industrial Recovery Act by a group of laboratories in southern California. As originally drawn the code would have included hospital laboratories but the Western Hospital Association, which had no part in preparing the code, objected to the inclusion of hospital laboratories. The group sponsoring the code thereupon drew up a paragraph exempting hospitals which it is expected will be incorporated in the code.

The main provisions of the code, as tentatively presented, are as follows: a forty-hour week for technicians, restriction of child labor, a forty-cent-an-hour minimum wage, prohibition of rebates, refunds, split fees and of any special rates tending to create a monopoly, and a scale of minimum fees which apply to all patients except hospital in-patients and "impecunious" patients for whom the physician requests a reduction.

A few of the minimum fees are: routine urinalysis, $1.50; complete blood count, $5; blood matching, $3 each; Wassermann test, $4; blood culture, $10; basal metabolism, $10; protein sensitivity, complete survey, $60; and gastrointestinal x-ray series, $25. If the code applied to hospitals its effect could be judged by the fact that Wassermann tests at the University of Chicago Clinics cost $0.17 each.

O. P. D. Consultation Service—

to doctors of the poor to family social workers

Consider the family doctor whose practice is largely among the poor. He has no open and above board method of getting for these patients the necessary laboratory examinations and the advice of specialists. Doctor Bradbury thinks the out-patient department should provide a purely consultative service for these doctors

By SAMUEL BRADBURY, M.D.
Medical Director, Out-Patient Department, Pennsylvania Hospital, Philadelphia

SEVERAL years ago the American College of Surgeons, in describing its health preventorium plan, advised that a complete physical examination be made available to everyone and that the control of this examination be placed in the hands of the family physician.

The college held that only in the hospitals of the country are there available all the professional personnel and physical equipment of use in making a comprehensive study. It suggested that hospitals provide office space and arrange access to all their facilities in order that the family physician, whether a staff member or not, could bring in his patients and control the study.

As we all know, there has been developed in the last thirty years an exceedingly complex and expensive variety of procedures as aids to diagnosis and treatment. For various reasons these procedures have centered in the hospitals, and there they may be used to their full advantage.

Consider, for instance, such diverse types of instruments as the cystoscope and the electrocardiograph, both in daily use and invaluable in certain cases. One is relatively inexpensive but requires exceptionally skilled technique and experience; the other is expensive, often operated by a technician, and its results may readily be interpreted by many physicians. Both instruments are seldom necessary for the general practitioner. When they are required he expects his patient to go to the specialist, usually located in a hospital, where it is necessary for the patient to go for many other examinations.

Place yourself in the position of the general practitioner of today. As special types of care have centered in the hospitals he tends more and more to be excluded from hospital experience. It is probable that in the great majority of his daily contacts (80 per cent is the figure usually quoted), this physician needs no assistance.

What of the other one-fifth of his practice, which amounts each year to a considerable number of persons? Some of these patients need hospital bed care, some require the technical skill of the specialist and many others need only the elucidation of some questionable point before proper care may be continued by the family physician. If the patients of the latter two groups are poor and particularly if the practice of the physician is limited to families with slim purses, there is difficulty in obtaining the necessary examinations. The physician who has patients of means may readily request of his confreres a reduction or omission of charges for the occasional impecunious patient, but the physician who never has a full-pay patient may scarcely ask for all of them examinations for little or nothing.

From some years' experience in out-patient practice I feel that these physicians fully realize their need and that the only method of procedure open to them is to refer the patient to the hospital, sometimes stating the condition that they believe to be present but more frequently asking only admission. Later, upon his request, the referring physician may be apprised of the results of whatever examinations have been made and often thereafter the patient will return to his care, probably at his solicitation. I am unable to prove that

such incidents occur but I believe that they do far more frequently than we are aware. The physician has been forced to a subterfuge to obtain what he needs; probably the hospital has done the work at less than cost when the patient in many instances could have paid this amount; the patient has been introduced to a public institution, which he may seek to utilize unfairly in the future, and frequently the patient is lost entirely to his physician.

Why not provide these men with an open and above board procedure, one that will seek to aid them in their work and will return their patients to them? Medical care of a family should be at its best in the hands of a physician who can adequately care for its members in their everyday illnesses and who feels no hesitancy in openly seeking help when the unusual occurs. It seems probable that care would more often be carried to its conclusion, even though it may be temporarily in the hands of a specialist, if the family medical adviser has knowledge of everything that has been done and actually controls the treatment.

Best Method of Serving Poor Patients

The problem is how we may best serve the physician with a poor patient. It may be asked, Why not accept such referred patients only for the examination requested? That would mean throwing open the laboratory services, including the x-ray department, to requisition by the general profession. It is unlikely that hospitals in the main are equipped for such a load. It seems best to accept these patients only upon a consultative basis, that is, the patient is received only as a case for diagnosis, staff physicians doing only the laboratory work necessary to make clear the diagnosis.

Care must be exercised to see that these patients uniformly be returned to the referring physician. They should therefore be set apart in some way; a specially colored folder or face sheet will indicate to each staff physician exactly what is wanted. Examination and discharge from either ward or out-patient service should be as expeditious as possible; certainly this results in lessened expense to the hospital and is far more satisfactory to referring physician and patient. Ambulatory patients should come by appointment and whether for special consultation or for general consultation, a particular staff physician should be in charge of each case. He should make the initial examination, direct all other examinations both professional and laboratory, make the final summary and communicate with the referring physician when the patient is discharged.

The cost of operation of such a service would be more than that of the usual case. However, when one considers that many of these patients now receive the same attention in a roundabout fashion and that in many instances the results of the examinations are transmitted to the physician, the difference in cost would be small. Such expenses are in the end, of course, a charge upon the community but it appears to be an entirely legitimate expenditure of community funds provided the patient is unable otherwise to obtain a similar service at a cost that he may meet.

As it may be accepted as a fact that these people pay their physicians, there is no reason why they should not pay the hospital. This seems only fair to all concerned; it prevents pauperization and it is an argument against a possible later plea from the patient for hospital care. There should be a stated fee, based on estimated cost for the service, which covers all expenses and which may be reduced when necessary. The fee should be less for special than for general consultation. Special consultations do not require as many physician contacts or as wide a variety of laboratory examinations as does the general consultation.

Some patients who need service of this sort would be unable to pay the full charge and it may be then reduced to a figure within their means. While the referring physician may indicate what fee his patient is able to afford, it should be clearly understood that acceptance or rejection of any patient and the grading of fees, if this is done, rest entirely with the credit personnel of the hospital after analysis of the financial status of the individual. In analyzing such a situation, income cannot be the only criterion; savings and other resources, obligations that must be met, the medical problem involved and sometimes the prognosis or cost of treatment must be taken into account. Rejection of certain applicants is mentioned as a possibility; it is probable that some patients would be sent who, according to generally used criteria of ability to pay for services, should be rightfully directed into private practice for their medical consultation needs.

What Report Should Include

The report to the referring physician may be sent by mail. It should endeavor to present the case to him as fully as it has been observed by the hospital. Salient features of the medical history, results of the primary examination, opinions of specialists and complete laboratory findings are all important. A short summary of the case with a descriptive analysis of the abnormality of the patient and, if possible, a note as to the cause, are useful. Treatment should be advised. If it appears that this treatment should be carried out by a specialist, it may with propriety be suggested, only to the physician, that the hospital will accept the

patient for care if the physician desires it and will return the patient with a note requesting it.

The question will arise as to whether or not the conclusions should be discussed with the patient. I feel that this should be done and believe it may be accomplished in such a manner as greatly to strengthen the position of the family physician; certainly no criticism should be made or implied. In a number of years' experience I have seen only two or three cases that have been unquestionably badly handled by their own physicians. In any event the patient should clearly understand that he is to return to his physician and that the hospital may no longer admit him without the written order of his doctor.

Another type of patient now referred to hospitals sorely needs advice, mainly as to prognosis or type of treatment. These are the cases sent by the welfare agencies of cities. In medicine the patient is the unit of care and study, but in welfare work in almost every instance the unit is a family and only too often sickness in one or more of its members is the reason for difficulty. The family social worker realizes this and knows that to make adequate plans for family rehabilitation she must have knowledge of the outlook for the sick person. Will he resume his place in the family economic unit soon or late? Is he a danger to well members of the family? Will it be necessary to plan for his care for some time to come, or is it likely that soon his place in the family will be vacant?

Suppose, for instance, that the breadwinner of a family has typhoid fever. The chances are that in three or four months he will resume his function. But another breadwinner is found to have a serious and rapidly progressive organic disease; the plan necessary for the guidance of his family will be quite different. In such cases our medical problem is only a part of a larger and more serious one—the welfare of a family. Proper medical advice should be available to the social agencies, and where can this be given better than in the outpatient department?

The community supports the hospital. It looks upon it with increasing favor in expectation of assistance for its sick, rich and poor. But the sphere of activity of the hospital is by no means complete. Consultation services to the physician with his poor patient and to the social agency with its family in trouble will help to round out that sphere and will further prove the usefulness of the hospital.[1]

[1]Read at the convention of the American Hospital Association, Milwaukee.

A Bit of Hospital History

Twenty years ago this month:

Dr. Richard Olding Beard of the University of Minnesota declared in the April, 1914, issue of The MODERN HOSPITAL that public hospitals should serve as public health centers. "An inquiry bureau should be organized in relation to the ward and dispensary service. Institutionally trained nurses should be in charge of this bureau and forth from it should extend the radiuses of visiting nursing, reaching the homes where the sick are, or whence they have come; investigating the sanitary conditions of these homes; probing, and teaching the prevention of the causes of disease."

Dr. Byam Hollings, assistant administrator, Massachusetts General Hospital, suggested that during the period between bed care and the full recovery of health patients need remunerative employment adapted to their strength, and announced that plans for this purpose were being developed at Massachusetts General.

Dr. W. L. Babcock, superintendent, Grace Hospital, Detroit, pointed out that the new industrial compensation laws have increased the number of paying ward patients, most of them drawn from the group formerly treated free.

The United States Commissioner of Education issued a report showing that during the academic year 1912-13 there were 1,094 nursing schools in the United States with 34,417 students, and graduating classes totaling 8,937. Ten years before the corresponding figures had been: 552 schools, 13,779 students and 4,206 graduates.

Julia C. Lathrop, chief of the Children's Bureau, Washington, D. C., issued her first annual report stating therein that 300,000 children under one year of age lost their lives largely through the inefficiency or ignorance of those who were responsible for them.

The Massachusetts General Hospital issued its one hundredth annual report.

The Philadelphia General Hospital, with more than 1,900 patients, was stated to be the largest general hospital in the United States.

In San Francisco the first hospital to be operated by labor unions was leased by the Union Labor Hospital and Training School Association.

Ratio of Private Rooms to Wards Should Be Checked

Often a readjustment of the ratio between the number of private beds to ward beds in the hospital or the conversion of space devoted to beds into much needed service facilities will result advantageously for the hospital and the community by improving the care of patients and thereby increasing the hospital's occupancy, according to the committee on hospital planning and equipment of the American Hospital Association.

To meet the demand for lower priced accommodations for private patients, cubicles may be installed in large wards if the ward service has fallen off, or unused expensive private rooms may be utilized as two-bed rooms. If the construction permits, partitions between two private rooms may be removed and the space made into a four-bed ward.

A Steam Heating System That Ensures Comfort and Economy

COMFORT is paramount in hospital heating. The avoidance of overheating is of primary and fundamental importance, for overheating means discomfort of patients and staff. The subatmospheric principle that governs distribution of steam and the flexibility of temperature regulation make it possible to avoid overheating in the Milwaukee County Emergency and Dispensary Hospital, Milwaukee.

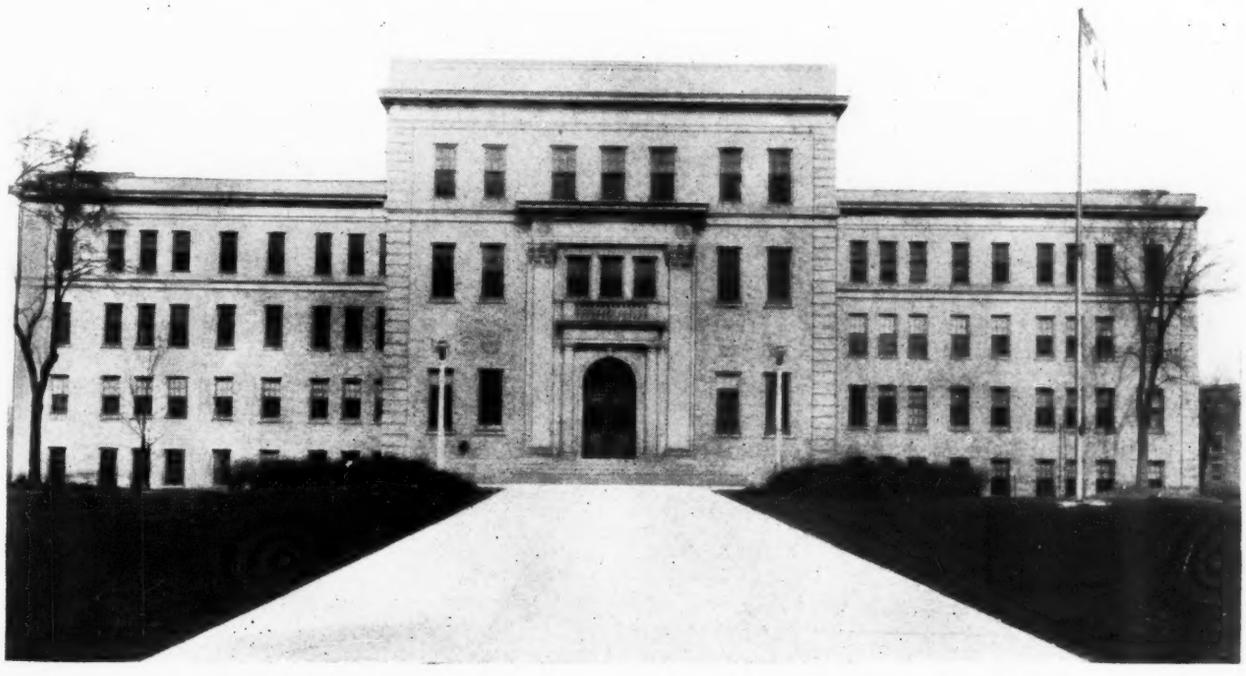
In addition to comfort, economy of operation is a factor of prime importance. The invested capital in property and equipment and the service rendered to nonpaying patients make necessary every possible saving in overhead.

Facts presented in this article show that both comfort and economy are secured by circulation of subatmospheric steam through a differential vacuum heating system, that is, a system in which a higher vacuum is maintained in the return lines than in the supply piping and radiators.

Average outside temperature for the heating season in Milwaukee is 33° F. and embraces temperatures ranging from about 60°F. down to —25° F. Within these limits the temperature often rises and falls with startling rapidity. It is important that these fluctuations, whether sudden or gradual, do not affect inside temperatures which must be kept as nearly constant as possible to the predetermined temperature of 70° F. To the effect of outside temperature upon the building must be added the influence of wind, sunshine, cloudiness and moisture. The sum total of these variable factors establishes the fluctuating heat loss from the building which the heating plant must balance, for heating, after all is said and done, is a matter of balance.

The fact that outside weather conditions determine inside heat requirements makes necessary a heat supply that can be varied in accordance with weather fluctuations. This requirement is met by varying not only the quantity of the steam circulated but, in addition, by varying the quality (temperature) of the steam itself. This is accomplished by creating varying pressures in the system. The relation between steam pressures and steam temperatures, as shown by Marks & Davis temperature tables, is presented in Table I.

Whether under pressure or under vacuum, cir-



Differential vacuum heating has provided comfort and economy at Milwaukee County Emergency and Dispensary Hospital.

culation of steam in the system is continuous. There are no "off" periods during transition in rate of supply. Changes in this rate are determined by changes in the steam pressure, not by interruptions in circulation.

Thus in mild weather we circulate what might be termed "cool" steam, in moderately cold weather the steam is "medium hot" and during cold snaps ordinary "hot" steam is circulated. Under this method of operation in accordance with weather conditions the temperature of the steam in the radiators may range all the way from 218.5° F. (very hot steam) down to 133° F. (very cool steam, just 35 degrees above the "body" temperature).

TABLE I—RELATION BETWEEN STEAM PRESSURES AND STEAM TEMPERATURE

Pressure	*Temperature, Degrees Fahrenheit*
5 lbs. above atmosphere	227
2 lbs. above atmosphere	218.5
0 lb. atmosphere	212
5 inches vacuum	209.9
10 inches vacuum	192
15 inches vacuum	178.9
20 inches vacuum	161
25 inches vacuum	133

The way in which the heating system of this hospital maintains a constant inside temperature under varying heat requirements is illustrated in Fig. 1. In diagram A the outside temperature is 0° F., the inside temperature is 70° F. and the heat loss through the wall of the room is 10,395 B.T.U. per hour. The radiator filled with steam at 2 pounds pressure and 218.5° F. temperature gives off the required 10,395 B.T.U. to maintain the room temperature constant.

In diagram B the outside temperature has risen to 40° F. and the heat loss has consequently decreased to 4,369 B.T.U. per hour. By lowering the steam pressure to 25 inches of vacuum and the steam temperature, in consequence, to 133.2° F., the heat output from the radiator is reduced to the requisite 4,369 B.T.U. per hour to maintain the desired 70° F. room temperature.

Range of Heat Output Is Wide

Diagram C illustrates what happens during mild weather operation. The outside temperature is 60° F., the heat loss has consequently dropped to 1,485 B.T.U. per hour, but the heat output from the radiator has been equally reduced by decreasing the volume of low temperature steam admitted until there is reached a degree of partial filling of the radiator that just balances the low heat requirements.

The range of heat output of the system thus extends without a break from 100 per cent capacity for extremely cold weather down to an output of zero when the need for heat ceases.

The simple diagrams in Fig. 2 show clearly how the circulation of steam at pressures below atmospheric during mild weather—in other words, "stretching the steam"—results in ideal heating comfort and marked fuel economies. A pound of water boiling at 2.3 lbs. gauge pressure will produce 23.38 cubic feet of steam (temperature 219.4° F.) with a heat value of 965.6 B.T.U. The same pound of water boiling at 19.74 inches of vacuum produces 73.33 cubic feet of steam, more than three

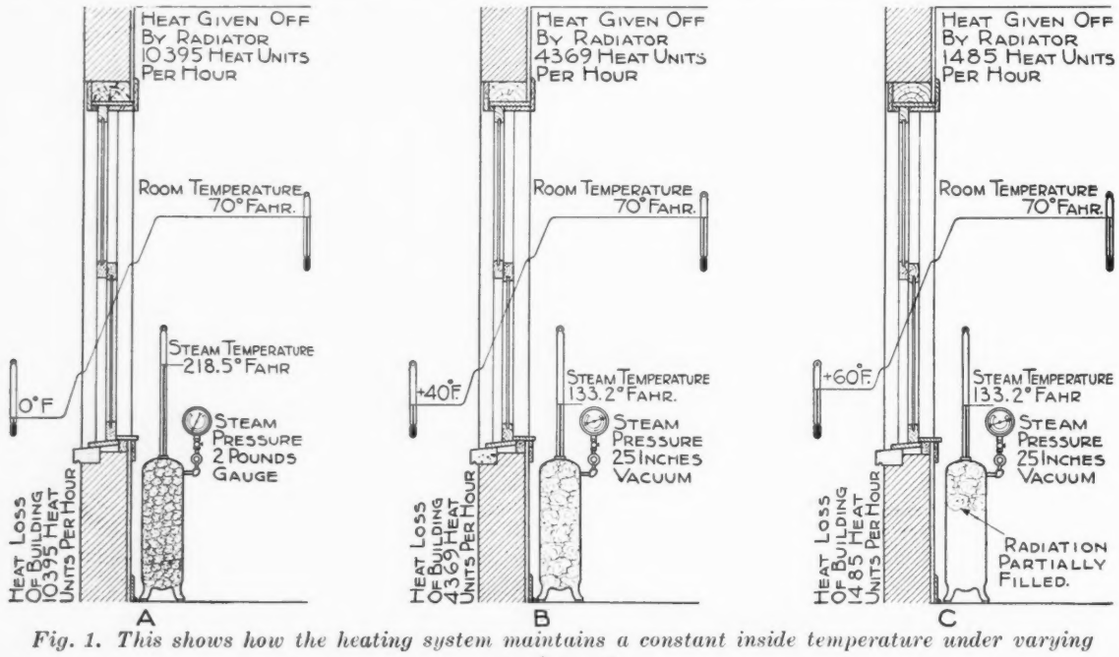

HEAT GIVEN OFF BY RADIATOR 10395 HEAT UNITS PER HOUR
ROOM TEMPERATURE 70° FAHR.
STEAM TEMPERATURE 218.5° FAHR
0°F
STEAM PRESSURE 2 POUNDS GAUGE
HEAT LOSS OF BUILDING 10395 HEAT UNITS PER HOUR
A
HEAT GIVEN OFF BY RADIATOR 4369 HEAT UNITS PER HOUR
ROOM TEMPERATURE 70° FAHR.
+40°F
STEAM TEMPERATURE 133.2° FAHR.
STEAM PRESSURE 25 INCHES VACUUM
HEAT LOSS OF BUILDING 4369 HEAT UNITS PER HOUR
B
HEAT GIVEN OFF BY RADIATOR 1485 HEAT UNITS PER HOUR
ROOM TEMPERATURE 70° FAHR.
+60°F
STEAM TEMPERATURE 133.2° FAHR
STEAM PRESSURE 25 INCHES VACUUM
RADIATION PARTIALLY FILLED.
HEAT LOSS OF BUILDING 1485 HEAT UNITS PER HOUR
C

Fig. 1. This shows how the heating system maintains a constant inside temperature under varying requirements.

times the volume produced in the first case, with a heat value of 1,000.3 B.T.U. and at a temperature of 162.28° F.

The pressure of the steam generated in the boiler is reduced by the control valve in the steam main and flows to the radiators at correspondingly lower temperatures as required to meet the varying heat loss from the building with automatic precision. The radiators do not throw out the intense radiant heat found in the ordinary heating system. There is a mild heat that sets up a more moderate rate of air circulation through the room. With this modified air movement less dust is set in motion and consequently less dust is breathed by patients and staff. Further, these cooler radiators cause less burning of dust and persons in the building are free from nose and throat irritations caused by "burnt" dust.

Differential heating is not a humidifier since it does not add moisture, but the mild steam results in cooler air circulation, in less "drying out" of air and in better conditions of relative humidity.

With three stories and English basement, the hospital building is 238 feet long and 196 feet deep including the garage. The ground area is 18,100 square feet. The building cubage is 796,400 cubic feet.

Steam is generated in the boiler room beneath the garage. Two low pressure boilers equipped for oil burning are used. The hot water service is heated by steam taken directly from the boiler.

Steam for the heating system passes through differential control valves to distributing mains in the basement. From these mains it feeds through concealed up-feed risers to approximately 315 direct radiators hung on the walls of the various rooms. The combined heating load totals 11,187 square feet.

One system of blast radiation installed in the basement supplies the air required for ventilating the basement and corridor. Ventilation for the operating rooms is supplied by a separate unit above the third floor.

Duplex differential vacuum pumps in the boiler room automatically maintain circulation of the subatmospheric steam in all radiators and return the water of condensation to the boiler.

TABLE II—FUEL COSTS FOR THE FOUR-YEAR PERIOD, JANUARY 1, 1930, TO DECEMBER 31, 1933

Total oil consumption, four years (48 months)	267,662 gallons
Less amount used for hot water heating	92,256 gallons
Net total for heating	175,406 gallons
Average gallon cost	$ 0.05157
Total cost of oil for heating only for four years	9,045.69
Average heating cost per year	2,261.42
Average heating cost per month (heating season of 8 months)	282.68

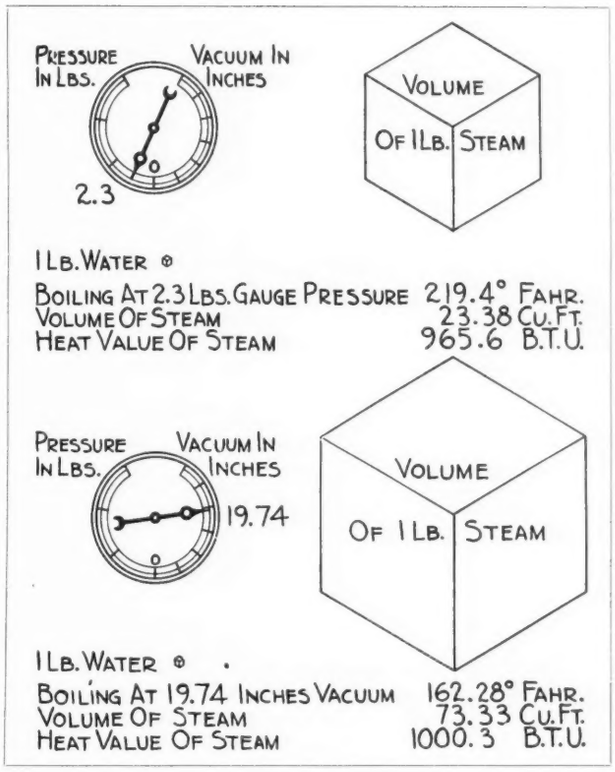


Fig. 2. This shows how "stretching the steam" during mild weather results in comfort and fuel economies. The top diagram represents ordinary steam heat, and the bottom diagram, differential heating.

The first two floors of the hospital were opened in December, 1928. The third floor was put into service eleven months later. The dispensary was opened in June, 1929. Daily records of oil consumption have been kept since the doors were first opened to the public. However, due to the varying amount of radiation in use in 1929, the figures in Table II are based on the four-year period only, from January 1, 1930, to December 31, 1933.

The cubage of the building is 796,400 cubic feet. The total degree days[1] during the four heating seasons were 25,640. Using these two figures, the amount of oil used per degree day per 1,000 cubic feet content was less than .04½ of a cent, and the amount of oil used per degree day per 1,000 cubic feet content was .008 of a gallon.

The total amount of equivalent direct radiation is 11,187 square feet. Figured against this amount of radiation, it required but .61 of a gallon of oil per degree day for 1,000 square feet and the cost per degree day has been only a trifle over 3 cents per 1,000 square feet equivalent direct radiation.

[1]The degree days are the product of the number of days times the number of degrees which the mean daily temperature falls below 65° F. This point on the thermometer was selected by the American Gas Association as the basis for computing degree days because they found that a mean average outside temperature of 65° F. was the dividing point between a temperature requiring heating and one not requiring it.

Low Building Costs Offer Rare Chance to Remodel the Hospital

By H. ELDRIDGE HANNAFORD
Samuel Hannaford & Sons, Architects, Cincinnati

The hospital can modernize its equipment and facilities bit by bit as convenience dictates. Such a program, if carried out systematically, will result in a thoroughly modern institution in a surprisingly short time. The structure's general plan must be basically sound, however, in order to justify extensive remodeling

"HOW can I continue to render adequate service with my present institution?" This thought has no doubt passed through the minds of many hospital superintendents during the past two or three years, since the financial stringency has practically eliminated any thought of immediate improvement of old hospitals by new construction.

While the question is difficult to answer, the problem is not hopeless by any means. All over the country there are examples of resourcefulness on the part of hospital administrators who have modernized existing plants and made them into attractive, up-to-date units capable of rendering first-class service to their respective communities.

In this article I shall point out certain things that may be helpful in formulating a modernization program. No attempt will be made to suggest "major operations," such as a general interior rearrangement or a restudy of the plan, because such suggestions are too drastic to be practicable or helpful in the majority of cases.

Let us assume, therefore, that the institution under consideration is properly planned, that its various departments are properly interrelated and that all subdivisions are of a size to render adequate service. The discussion will be confined to alterations and modernization work that may be accomplished without seriously affecting existing construction and with minimum disturbance to the normal hospital activities.

Before determining any change, the hospital superintendent should set up as a yardstick certain results that the proposed change should accomplish.

The following is submitted as such a yardstick: (1) will the change improve the nursing and medical service? (2) will it increase the patients' comfort? (3) will it justify itself economically by decreasing insurance rates, by reducing maintenance and operating costs, by creating additional revenue for the hospital and by creating a more favorable impression on the general public from whom, usually, must come the hospital's revenue?

With the yardstick established, let us inspect the hospital in order to determine what can be done to bring it up to date.

If the exterior of the hospital is not of fire resistive construction this condition should be immediately rectified. Wood walls can be covered with a veneer of brick, hollow tile, stone, concrete block or metal lath and cement stucco. Wood porches, cornices and other inflammable appendages should be eliminated entirely or replaced with similar items of fire resistive construction.

Lower Insurance Rates Will Result

Wood windows and doors may be replaced by metal covered wood or hollow metal items, and where such openings are within a distance of thirty feet or less from an adjoining building, wire glass should be used. Wood shingle roofs should be replaced by roofs of slate, tile or other fire resistive materials, or covered with composition or asbestos shingles laid over the old wood shingles. These changes will reduce insurance rates, increase the life of the building, enhance the safety of the patients and personnel and increase public confidence in the institution.

There are many changes that can be made on the interior, and those involving safety of patients

and personnel should be given first consideration. Items that should be studied include open wood stairways, open elevator shafts, dumb-waiter shafts and floors of wood joist construction. It usually is not possible to change the floor construction to reenforced concrete or some other fire resistive type. The stairs, elevator shafts and dumb-waiter shafts should be enclosed in masonry walls and the openings into these enclosures should be fitted with kalamein or hollow metal doors with wire glass panels. New stairs of pressed steel or reenforced concrete should be provided, and every precaution should be taken to prevent the spread of flame and smoke by enclosing all open wells or shafts.

Obsolete Plumbing Should Be Replaced

Storage rooms and vacant attic spaces should be protected with automatic sprinklers. The cost of such a system should be amortized over a period of years by the insurance premium reduction.

The various floor services, such as utility rooms, service pantries, service kitchens, bathrooms and toilet rooms can be greatly improved by the installation of impervious materials on floors and walls. Tile or terrazzo gives excellent service as flooring or wainscoting. Cases, refrigerators, lockers and similar equipment should be set up on sanitary bases of tire or terrazzo and open spaces above such equipment should be furred or tiled-in so as to facilitate cleaning and cut maintenance costs.

Obsolete plumbing fixtures and sterilizers should be replaced with modern equipment, using a wall hung or tiled-in type if possible. Wood cases should be supplanted by white metal cases or enameled steel cases.

Corridors should extend through to the outside walls in order to secure light and air at the ends. This should be arranged for in any scheme of modernization, if possible.

Resilient flooring, such as rubber, linoleum or asphalt tile, is highly desirable as it promotes quiet. Acoustical treatment of corridor ceilings merits serious consideration for the same reason.

Perhaps a change of corridor lighting fixtures will help. The ordinary lighting fixture throws light in a circle, and thus gives a spotty effect in a long corridor. There is a type of glass bowl on the market, however, which, by means of its arrangement of prisms throws a uniform field of light in a long oval shape with its long axis parallel to the length of the corridor, thus giving uniform lighting.

Flush type lighting panels in walls about eighteen inches above the floor should be installed for night lighting.

A restudy of the culinary department often pays big dividends. Consideration should be given to the use of steel bins and shelving, efficiently arranged, in order to facilitate storage of supplies. Also it may be possible to reduce the kitchen force by changing the equipment to a more modern, more efficient type. Perhaps even a rearrangement of present equipment will benefit the service. Adequate ventilation, both supply and exhaust, should be provided and proper fire protection installed in the culinary department.

There is, of course, the basic determination to be made as to whether the hospital is justified in having its own laundry. This primary decision must be made on the merits of each individual case. However, if the hospital does maintain its own laundry the suggestions given in connection with the culinary department apply also to the laundry.

The boiler room should be studied carefully. Will a change of fuel result in lower heating costs and make it possible to reduce the number of employees or to release certain employees for other duties in the hospital? It is well to consider the installation of a boiler of greater efficiency. If coal is used as a fuel, coal handling equipment, stokers and automatic damper regulation will increase heating efficiency. The installation of a modulation system will prevent overheating and fuel waste on mild days.

Perhaps no piece of equipment dates a building more definitely than its elevators. Elevator requirements in hospitals are so exacting that even the best equipment on the market is hardly good enough. New elevators with all safety provisions, neat appearing cabs, and smoothly operating, silent engines will benefit service in general and will make an excellent impression on the public. Automatic controls and door operators are worth considering.

No Reason to Fear Color

Before reviewing the various improvements it is possible to make in patients' rooms and wards let us consider the possibility of changing the type of accommodations by simple alteration. Often the removal of a partition between two private rooms will convert this space into a desirable two or three-bed room which can be kept continually occupied at a low rate, whereas the space devoted to private rooms may be vacant a large portion of the time.

A great deal can be accomplished toward modernizing patients' rooms and wards by refurnishing and redecorating. The replacement of old-fashioned "institutional white" equipment with modern enameled metal furniture in plain colors or grained to imitate wood will add to the home-

likeness of the room. Simple drapes at the window, washable scatter rugs on the floor and repainting of the walls and ceiling will enhance the room's appearance. A high quality lead, zinc and oil enamel in a semigloss or eggshell finish should be used for this work. There is no reason to fear the use of color. Soft tans, greens, French grays or similar colors may be used on the walls, with an ivory or putty color on the ceiling.

Terrazzo or rubber tile floors give admirable service and should supplant wood floors in patients' rooms.

Marble or slate window stools give better service than wood window stools and require practically no maintenance.

New Lighting Fixtures Are a Help

Molded wood doors, frames and finish should be eliminated and plain flush panel (slab type) wood doors in plain pressed steel frames should be substituted. Transoms should be eliminated and ventilation secured by means of a ventilating louver in the door or, preferably, by installing dwarf (so-called saloon type) doors on the corridor side of the opening, thus permitting the room door to be open without depriving the patient of privacy.

New lighting fixtures of a semi-indirect no glare type may be used advantageously. These fixtures should be wired up on two circuits—one to give full light for the fixture, the other to operate a low wattage light to permit night use by the nurse without disturbing the patient.

The importance of impervious materials for floors and walls in the operating department cannot be stressed too strongly. Tile and terrazzo, preferably the former, seem to give the best results for operating department floors. Tile, terrazzo, marble or structural glass are satisfactory wainscot materials.

Explosion of ethylene gas in the operating room is a hazard and it is well to consider the air conditioning of this room, particularly as regards humidity; and also the matter of grounding all equipment and personnel against creating sparks from static electricity.

Service rooms, such as sterilizing rooms, scrub-up rooms and nurses' workrooms, should be brought up to date with modern equipment. Plumbing fixtures should be of the wall-hung type, or if this is impossible, they should be placed on sanitary bases. Sterilizers should be tiled-in if possible or otherwise wall-hung. Every effort should be made to eliminate vapor and excessive heat generated by sterilizers. This may be accomplished by means of exhaust ventilation.

Proper storage of instruments, and storage of both sterile and nonsterile supplies should be carefully considered and cases and shelving that are obsolete or that require constant maintenance should be replaced by built-in cases of white metal or enameled steel.

The suggestions given regarding the operating rooms and service rooms also apply to the delivery room and its service dependencies. Labor rooms should be provided with an adjoining small sub-utility room; the room partitions should be sound-proofed and the ceilings treated with a sound absorbing material.

The nursery is a source of great interest to the public. This room should be arranged so as to permit the viewing of the infants by visitors without their entering the room. The nursery should be cheerful and spotlessly clean. Adequate bath and utility rooms for proper infant care should be provided in immediate proximity to, or as a part of, the nursery.

The following items suggest themselves as desirable for inclusion in any modernization plan:

Change all leg type radiators to a wall-hung hospital type.

Insulate all steam and hot water lines against heat loss.

Apply acoustical material to ceilings of potential noise centers, such as corridors, utility rooms, service kitchens, labor rooms, nurseries, public waiting rooms, doctors' and nurses' rest rooms and the laundry.

Attractive Lobby Creates Good Will

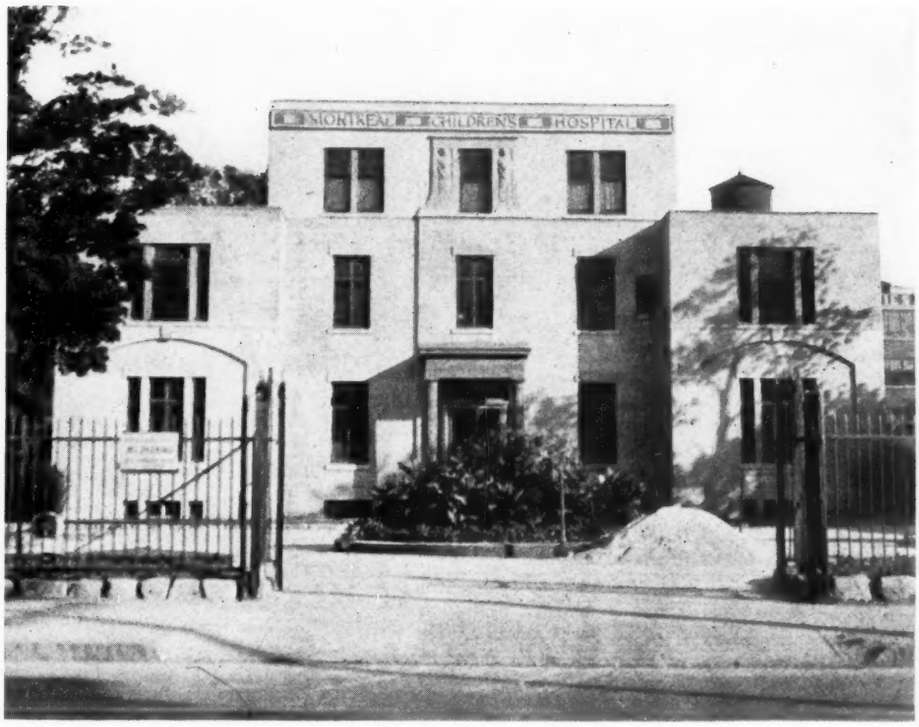
Consider the use of air conditioning units for some of the patients' rooms. This may prove of particular value in the case of patients subject to hay fever, asthma and similar respiratory diseases.

The use of thermal insulation in roof spaces and on the boiler room ceiling will reduce heat loss and excess heat transmission.

It should be remembered that the entrance lobby and the reception room are the public's first point of contact with the hospital. Consequently, these rooms should be cheerful and inviting. A small expenditure for redecorating these spaces and for comfortable furniture will prove profitable from a good will standpoint.

The liberal use of paint as a maintenance agent will do much to create an impression of efficiency. Chipped and scratched door frames and equipment create an impression of careless administration.

All of the suggestions made can be carried out as convenience dictates. It is possible in a surprisingly short time to rejuvenate an entire institution at a relatively low cost by a comprehensive program of modernization, provided the general plan and initial construction are correct and basically sound.



The roofs were taken off the old building (below) and the whole structure was carried up one story in brick, faced with colored stucco. The result: the attractive building at the right.

Montreal Children's Hospital— *before and after*

By HUNTLY WARD DAVIS
Architect, Montreal

AN OLD brick house built about seventy-five years ago at the corner of St. Antoine and Guy Streets in Montreal became the home of Montreal Children's Hospital in 1920.

This private home was erected in what was at the time the fashionable part of the city, but when the hospital leased the building the district had become one inhabited by poorer people and there was no hospital within a long distance.

Montreal Children's Hospital, one of several children's institutions in the city, was founded in 1920 by Dr. Albert E. Vipond, with the assistance of his brother, Dr. Charles W. Vipond, and several other doctors and a number of laymen who were interested in child welfare.

The work was carried on by the doctors until 1930 when a group of laymen undertook to reorganize the various boards and put the hospital in a sound financial position. This resulted in the purchase of the property, the extension and remodeling of the building and the paying off of debts, leaving the property and buildings free of all encumbrances.

Except for numerous minor changes and the installation of modern equipment in the operating room, the building remained substantially unchanged until 1930. At that time, however, it was felt that while the location of the hospital could not be bettered, additions and improvements were needed to provide for greatly increased demands.

These four floor plans show the layout of the building after alterations were completed. A third floor was added to provide living quarters for nurses.

The remodeling program involved a total cost of $61,500. The large wings were divided to form wards and a clinic. The basement was entirely remodeled to include service facilities, a kitchen and a staff dining room. A third floor was added to provide living space for nurses. The operating room and other large rooms in the front of the central portion of the building were not changed during the alteration.

Floor Space Greatly Increased

The original building contained about 9,400 square feet of floor space. Of this the greater portion of the basement was unusable and a considerable portion of the upper floors was more or less waste space. The remodeling increased the floor area to about 13,500 square feet.

Old roofs were taken off and the whole building was carried up one story in brick, faced with stucco colored to match the limestone below. The two main existing cross walls were of stone, and new walls, enclosing the future elevator and the new stairs, were built of brick. New floors and roofs are of concrete so that the building is practically fireproof.

With the exception of entrance hall, office, board room and operating room, the interior was entirely remodeled. The kitchen, laundry and other rooms in the rear of the basement are entirely above ground and there is abundant sunlight, due to the slope of the land. The dining room and other front rooms have areas to give light.

The hot water heating installation is new. The boilers, which take care of the domestic hot water supply as well as the heating, are oil burning. They are also fitted with a garbage consuming device. A dumb-waiter runs from the main kitchen to the diet kitchens and also to the top floor. There is a linen chute running from each floor to the laundry in the basement.

On the first floor in the east wing is the out-patient clinic with its waiting room, consulting rooms and dispensary. The west wing is divided into two wards with a bathroom adjacent. The rear part of the main building contains a small observation ward, a utility room and a diet kitchen.

The second floor is similarly arranged except that there are wards over the clinic. In addition, a linen room and a doctor's room are convenient to the operating room.

The top floor, which is given over to the nurses, may at a later date be extended over the whole building and the main building may be carried up another story. The remodeling was so designed that the present structure can be extended with very little alteration.

Linoleum Covers All Floors

All old molded doors, heavy architraves, skirtings and plaster moldings were removed throughout the building. These were replaced with flush doors, rounded corners in plaster and coved skirtings. The exterior of the building is covered with stucco and the interior is finished with gypsum plaster. Floors were covered with linoleum throughout.

The hospital is surrounded by a garden. A great part of the work of the children's hospital has always been the outdoor clinic, a logical result of the location.

The Child Guidance Home as a Factor in Mental Hygiene

By WALTER E. LIST, M.D.
Superintendent, Jewish Hospital, Cincinnati, and
MRS. WM. H. ROSENTHAL
Director, Psychiatric Social Service, Child Guidance Home, Cincinnati

THE Child Guidance Home of the Jewish Hospital, Cincinnati, is probably the only institution of its kind in the world. Operated jointly by the Jewish Hospital and the United Jewish Social Agencies, it is devoted to the observation of children with behavior difficulties.

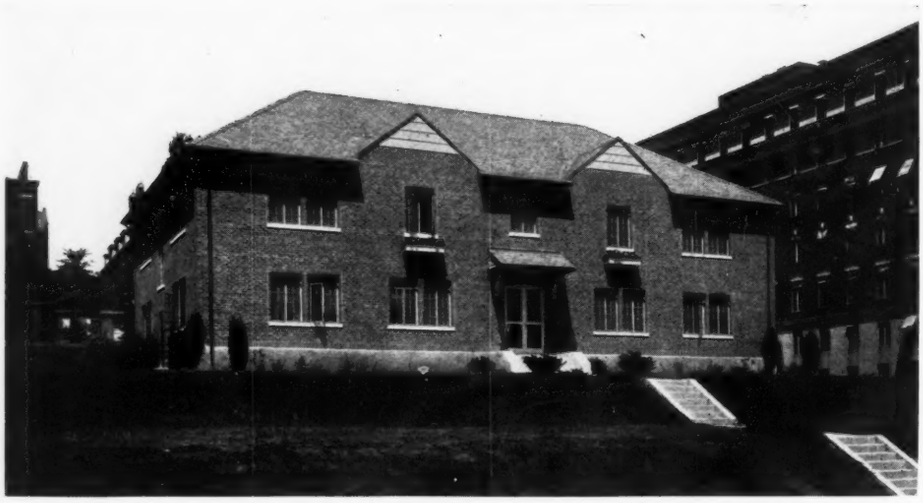
Children from toddling age up to sixteen years are intensively studied in the home with a high degree of success. Since the opening of the home in July, 1920, more than 1,050 children have been studied, and as a result of the diagnoses and recommendations made, about 70 per cent of the children have made satisfactory adjustments.

The child is first sent to the children's pavilion of the Jewish Hospital where a complete examination is made. This includes a thorough physical examination, as well as dental and neuropsychiatric examinations and an endocrine study. Special tests such as cardiograph tracings and lumbar punctures are made when indicated. Each special test is made by the staff physician in charge of that specialty. In this way the child receives the benefit of diagnostic group medicine. Upon the completion of the tests the child is transferred to the Child Guidance Home.

Once in the home, he takes his place in a family of fifteen. In addition to the regular household tasks that a child is normally required to do, manual training and extracurricular school work are given. During this period of observation, varying from two weeks to two months, the child attends the neighborhood public school where he is placed in a grade according to his mental capacity. The principal and teachers are informed regarding the nature of the child's problems and their aid and cooperation are enlisted. In addition to the regular schooling, a teacher visits the home regularly to coach the children and to give them any special instructions that may be needed. Psychiatric examinations and psychologic tests are also carried out at the guidance home.

Frequent notations are made regarding the

Accommodations of the type shown here are provided for private patients at the Child Guidance Home. There are three such rooms, all of which are furnished in an equally attractive manner. Private cases have been admitted from every part of the United States.



This homelike, two-story structure was dedicated in January, 1933. The building accommodates twelve dormitory patients and three private patients. There is a recreation room in the basement.

child's social reactions both at school and at the home. Thus his record is a dynamic one that gives a kaleidoscopic picture of his reactions during his stay in the home. In the majority of cases before a child is discharged a conference is held by those persons interested in him. Contact with him is continued even after he leaves the home and follow-up notations are made on his record. Thus the record contains facts secured years after the child has been discharged from the home. Children are encouraged to return to the home voluntarily in order to report.

Research Work Is Carried on

An endocrine clinic is conducted every Saturday morning. In addition, many children are brought to the home to attend the weekly club meeting and Bible class. There is always some kind of recreation on Saturday afternoon or evening—a picnic, a trip to the zoo or a visit to the movies.

For the past two years the Child Guidance Home has been an integral part of the teaching facilities of the medical department of the University of Cincinnati. Senior medical students receive clinical and didactic lectures at the home and have access to a valuable reading and research library known as the David Wolf Memorial Library. This library contains an unusual collection of books dealing with the problem child and related subjects. It is affiliated with the library of the medical department of the University of Cincinnati and the library of Cincinnati General Hospital and it is available to the citizens of Cincinnati. The library is conducted under the same rules that exist in the Cincinnati public libraries.

Research work is carried on continuously at the Child Guidance Home where new problems and projects constantly present themselves. Several fellowships have been available in the past for students eager to do research work. The staff of the Child Guidance Home consists of Dr. Louis A. Lurie, director; Dr. Emerson A. North, assistant director; Mrs. Wm. H. Rosenthal, director of psychiatric social service; Mrs. Robert Wise, assistant director of psychiatric social service; Dr. S. K. Siebler, attending pediatrician, and Dr. Frank Seinsheimer, assistant attending pediatrician. The entire medical staff of the Jewish Hospital acts in the capacity of consultants.

A new homelike two-story structure was formally dedicated in January, 1933. This new building accommodates twelve dormitory patients and three private patients. The basement contains a large recreation room for the children to use on rainy and cold days. In this room are books, work benches, a piano, a phonograph, equipment for basketball, a place for roller skating and a ping-pong set.

The first floor includes the library, reception room, general offices, the private office for the director of psychiatric social service, the kitchen, dining room and the children's library and play room. The second floor contains the matron's suite, the girls' ward, the boys' ward, toilets, bathrooms and three rooms for private patients.

Project Has Proved Its Worth

Every agency in Cincinnati and Hamilton County has referred cases to the Child Guidance Home. The home has worked in close cooperation with the Central Psychiatric Clinic, the juvenile court, the board of education, the Children's Hospital and many other agencies. Private cases have been admitted from every part of the country. Thus an activity started as an experiment thirteen years ago has now more than proved its worth. It is an integral part of the mental hygiene activity of Cincinnati, and stands in the forefront of those institutions interested in the study of behavior difficulties of children.

A Spring Housecleaning Program for the Administrator*

By JOSEPH C. DOANE, M.D.
Medical Director, Jewish Hospital, Philadelphia

Hospital plants the country over are badly in need of renovation and repair. Funds have been low and this work has been obliged to wait. Now is the time for the alert superintendent to make a thorough inventory and lay plans to put the institution in the best possible physical order

THERE are other signs of spring besides the return of the song birds and the advent of the baseball season. Garden implements and seed catalogues occupy the interest of the householder and painting and repairing become the order of the day.

Much the same atmosphere prevails in the hospital as spring approaches. The seasonal urge to renovate, to replace worn out equipment with new, to freshen and brighten interiors, is felt and the superintendent should give free rein to it.

In spring the wise administrator bestirs himself to inspect his institutional plant more carefully than ever. Matters that particularly apply to the conduct of the hospital during hot weather deserve and demand his attention. Repair of insect screens and doors, inspection of windows with respect to minor carpentry that will enable them to move up and down easily, application of hardware to outside doors so that they will neither slam nor remain open, are necessary and timely activities. Now is the time to remember that a dollar spent wisely for repairs frequently prevents the outlay of hundreds of dollars later.

Careful Survey Is the First Step

During the past two or three years there has been a strong tendency, if not a necessity, to permit the accumulation of minor and major disrepairs. Perhaps the hospital plant the country over has never been permitted to display the degree of shabbiness that now prevails. Because of lack of funds for material and labor, a large bill of repairs has piled up that will involve the expenditure of large sums of money, not to mention a great deal of time.

The wise administrator will prepare now to inventory his physical plant and personally and carefully to inspect and tabulate his findings. Inspection is an art that is often too casually learned and practiced. Many persons lack the ability to see a need and promptly and economically to meet it. A careful survey should be made not only of those portions of the institution that are most frequented but also of cellars, garrets, outbuildings and all other parts of the institutional plant. It is surprising how quickly insanitation can develop when no one makes it his specific business to discover and correct it. These visits to the various divisions of the institutional plant, therefore, will have as their object the detection and correction of insanitation as well as a painstaking attempt to discover and repair deterioration both in buildings and in institutional grounds.

While these trips through the hospital property are being made, the condition of scientific equipment will likewise be observed. Upon his return to his office from inspectorial visits the superintendent should record his findings and when a complete survey of the plant has been made he can formulate plans for correction of the defects discovered. Some of these will be in the nature of emergencies, others may be attended to when it suits the convenience of the mechanical force while still others will be of such proportions that board approval should be sought before the work is attempted. Climatic and census conditions may determine that extensive renovation of a building devoted to living quarters or of a private room wing or of a general ward should be delayed for several weeks or months. If plans are laid in advance, however, an orderly approach to the correction of these needs may be made.

Before we consider the renovation of heating, lighting, plumbing and other major equipment, it appears timely to suggest the necessity of repair-

*Practical Administrative Problems Series.

ing movable equipment, including such articles as wheel chairs; food, ice and garbage trucks; wheel stretchers, and bed wheels or casters. There is no more unsightly article about the hospital than a wheel chair in need of repair. Broken seats and backs, foot pieces hanging at an angle, tires that are loose, wheels that are not true, not only lessen the efficiency of these necessary articles but also serve to make eyesores of them. Rarely does the institution possess a mechanical force with sufficient skill and equipment to recane and generally repair wheel chairs. Usually, however, tires may be reset by the hospital mechanic, the superintendent having learned that he can buy and replace tires much more cheaply than he can have this work done outside.

Are Electric Fans Ready?

Ice, food and garbage trucks with flat tires and loose wheels may have been permitted to disturb patients. Wheels or tires may be replaced but frequently new trucks are more satisfactory and economical in the end. Wheel stretchers are often used until they actually become unsafe. To repair the tires of bed casters is often to save linoleum from being torn and polished floors from being irreparably damaged. It is not uncommon to observe floorings which have been badly scarred by the careless moving of such equipment when out of repair. Now is the time to assemble for inspection all wheeled equipment. The purchase of new casters for ward and room beds, even though a considerable number are needed, is a wise and usually an economical move.

With the advent of oppressively hot weather, it should not be necessary to make frantic efforts to locate and repair electric fans. The methodical executive makes sure that this equipment is collected in the fall and repaired and tagged with the name of the department from which it came. No article used in the hospital gives more comfort and possesses greater actual life saving potentialities than the modern electric fan. It is important that this equipment be ready for use when needed.

Major renovation and rearrangement of wards and private room wings next claims attention. Often it is discovered during the winter months that it was impossible to ventilate a ward space without exposing patients to dangerous drafts; that light plugs, because of improper arrangement or installation, made the care of patients at night a difficult task, or that ward linoleums had become torn or blistered. Summer, when the census is usually low, is the time for such major repairs. Repainting and reglazing at a minimum cost often transform to a surprising degree the physical aspect of ward and room areas. Moreover, the wise administrator has learned that spray painting is both speedy and economical since this method enables him to renovate a ward, with its furniture, in but a fraction of the time necessary for hand work.

When beds are transported to the institutional paint shop for renovation, replacement of mesh with link springs is frequently found to be inexpensive and necessary. Old frames may be easily bored and mesh springs, always potential hiding places for vermin, may be replaced by sanitary link springs.

Now is the time to inspect and repair such equipment as pneumonia tents, oxygen trucks and tanks with their attached tubing and masks. The ward call bell system may require repair. In the surgical ward repainting and reglazing are needed. No large open ward can be as useful or as efficient as one that is cubicled. These partitions can be of inexpensive duck or some similar material properly suspended on movable rollers. Such cubicles are almost as efficient as those of metal or glass. Many persons believe that cloth cubicles lend themselves to greater flexibility than do fixed ones.

Repair of equipment in the surgical ward consists of renovation of suction apparatus, special diagnostic lights, sterilizers, dressing carts and other equipment and apparatus peculiar to the type of work performed here. Cubicles should certainly be found in the postoperative ward, and particular attention should be paid to lighting and color of paint in this department.

Radiation May Need Attention

Perhaps the most necessary and the most expensive type of repair is that of the plumbing and heating system. Until warm weather arrives, of course, major repairs to the heating plant are difficult if not impossible. However, it is usually possible to save money by keeping the mechanical departments of the hospital functioning efficiently. Repair of leaking steam joints, replacement of worn insulation, reboring of boiler tubes and replacement of old and corroded steam lines, are necessary money saving steps. Every superintendent should endeavor during the summer season to perform a definite amount of steam line repair and replacement so that after a few years this whole equipment has been rendered efficient. Such a plan does not require a large expenditure at any one time.

It may have been found during the winter months that steam radiation is insufficient in one place and superabundant elsewhere. If observations as to room temperatures are properly recorded during a cold period of winter, it will be possible for a forehanded executive to prepare in-

telligently for coming winters so that he will not find himself with cold operating rooms, cold dressing rooms and cold dispensaries when heat is most needed.

There is no excuse for "hand to mouth" administration when methodical and carefully recorded inspections throughout the year make possible a regular routine of replacements and repairs. When carefully followed, such a routine should keep the institutional plant in excellent physical condition at all times.

Is Water Pressure Sufficient?

Now is the time to test and repair elevator and dumb-waiter equipment. To find it necessary to shut down a busy elevator for repair when it is most needed usually means that no one took time to learn that such major needs were likely to develop. To find suddenly that an electrically operated bank of dumb-waiters requires the rewiring of motors or some other major change is to disrupt food service unnecessarily. Spring inspections are similar to the regular inspections made at other times except that they are slightly more inclusive and thorough. From these seasonal inspections a comprehensive plan for the year's repairs, barring emergencies, can be made.

Next to the heating plant, bathing and toilet equipment requires the most careful attention to repair and replacement. Inadequate toilet equipment should be gradually replaced with modern fixtures. Sufficient water pressure on higher floors to flush toilets and provide bath water is of the greatest importance. A flush valve equipment attached directly to water lines is preferable to the old-fashioned water box.

Discovery during cold weather that there is insufficient hot water in patient and living areas should indicate the necessity of inspecting hot water generators in basements for the presence of corroded or broken piping or for insufficient steam pressure. Institutional engineers are sometimes tempted when water generator tubes leak to replace them with ordinary iron or galvanized piping, thus lowering their efficiency during the colder months.

Lucky is the institution that possesses an honest, industrious and self-reliant engineer. The superintendent frequently does not acquaint himself with the mechanics of his heat, light and power departments. Electric motors are allowed to become soiled and brushes to spark, threatening destruction of the motor itself because of an inexcusable lack of inspection. Recently it was discovered by an executive that the placing of stack dampers in his power plant resulted in a fuel saving of 10 per cent. The average superintendent might not be alert to such possibilities, but a competent engineer should be at hand to advise him of such potentialities for economy.

When heat is no longer required, burned-out ash pits and grates should be replaced. In some hospitals it has been found advantageous to transform the heating plant so as to burn oil instead of coal. In others, such as institutions for the care of the mentally ill where help is plentiful, this change has resulted in a monetary loss. One superintendent recently discovered to his own chagrin that oil plants make no ashes and that the repair of institutional roads and grounds was made difficult because of this fact.

The efficiency of the laundry plant should be verified. Many a somnolent laundry supervisor is allowed by an equally lethargic executive to waste quantities of money by permitting leaky washers to continue in service. Inspection of equipment by a trained laundry expert will frequently result in the saving of much money. It may be that the transformation of the power system from an overhead to an individual motor plan would save fuel. Perhaps no other hospital department gets so little attention as does the laundry, and a superintendent who is not prepared through the possession of specialty information to pass on the efficiency of his laundry plant would find it to his advantage to summon aid from outside.

Screening for the Garbage Disposal Plant

The general inspection should not slight the homes for nurses and for other members of the hospital family. Renovation and cleaning of all cloth furniture, dry cleaning of hangings and rugs, supplemented by thorough housecleaning of the whole building, are certainly spring necessities. It is surprising, however, how often spring comes and goes without the housekeeper feeling the urge for an especial effort at cleanliness. Inspection of the hospital plant should not confine itself to the obvious. Areaways and other out-of-the-way corners that are littered with papers, dust and other kinds of refuse should be thoroughly cleaned each spring.

The garbage disposal plant deserves much attention. Fly screening should be installed here. It is to be remembered that if horses or laboratory animals are housed on the grounds, properly screened manure pits with cement bottoms prevent breeding of flies.

The forward looking gardener is now busy reseeding and resodding winter ravaged lawns. No hospital plant, no matter how immaculate its interior, can present an inviting appearance if it is surrounded with shabby lawns and poorly trimmed hedges and trees.

Editorials

Firsts and Lasts

WHY is an indigent man, when he becomes ill, transformed in a twinkling from a community charge to a private responsibility? Millions of dollars of government funds are appropriated to prevent those who are penniless from suffering hunger and cold. But when disease enters the home the private hospital must care for the unfortunate one without recompense. State subsidization of the hospital exists in but few of the states.

When no government aid is granted the hospital's burden is twofold. It must provide food and shelter, the expense of which had formerly been borne by public funds, and it must also supply costly medical care. The MODERN HOSPITAL does not begrudge physicians the paltry fees allowed by emergency relief boards for extrainstitutional treatment of indigent patients. It cannot understand, however, the rationale of excluding hospitals from a cost payment of federal or state relief funds for the care of the indigent.

Perhaps if the suggestion recently made in these columns of budgeting for free care were firmly insisted upon boards with appropriating power would recognize the justice of the hospital's request. The complication of a purely relief picture by the insertion of a sickness factor surely should increase rather than nullify the government's responsibility. The hospital should refuse to be placed always on the deferred list when payment for its service is under consideration. At present it is often a case of the first being last.

A Constructive Purchasing Policy

DURING the difficult financial period from which our hospitals are now emerging a distinct service has been rendered by the great number of manufacturers and dealers in legitimate hospital products. Times without number distressed superintendents have found it necessary to request an extension of time in the payment for hospital supplies. And almost always have they found these houses willing to extend credit and leniency in the payment of bills for goods already received.

The scoffer may consider this action a shrewd attempt on the part of dealers to continue to secure the hospital's business. In some instances no doubt this is the case. On the other hand many institutions which today bid fair to weather the gale would have long since been required to close their doors had not dealers in hospital supplies been willing to assist institutions in carrying an accumulating deficit.

The hospital field should thoughtfully consider the above facts before an endeavor is made to save money by patronizing those who sell inferior goods at a price below that of quality materials. Those houses that through years of research activity have developed products of quality deserve better of the hospital field than this. In the long run, laying aside the claims of justice, high grade goods are the most economical. To alter a purchasing policy because of a temporary pressing expediency is to complicate the hospital's recovery from depression.

Values and Prices

A LEADER of industry recently remarked that quality determines value and quantity, price—terse words, peculiarly applicable to the hospital.

The MODERN HOSPITAL during the past two years has repeatedly urged hospitals to examine closely the character of the product they offer to the public. None can deny that the ultimate in hospital service has not been reached. Where is the evidence that as a public utility the hospital has exhibited that degree of flexibility, that timing with and perception of the trend of the times that have made possible successful and prompt adjustment to the needs of the day? Often such stock taking will reveal that the same product is being offered for sale today as in 1929, but with fewer takers.

If the volume of hospital business can be increased then the unit charge for service can be lowered. But the major attention of hospital boards too often seems to be focused on lowering the cost of service. By so doing the quality is often also lowered. What the public demands is a new and resplendent 1934 model of hospital service at less than the cost of five years ago. Hence this is not the time for lowering standards. It is the opportune moment for creating broader community contacts, for creating good will on a larger and more definite scale than ever before. If a greater percentage of available hospital beds can be more constantly filled with patients who pay less per capita, gross and also net incomes will rise instead of fall.

When beds are empty it is no certain proof that there is a lack of need for their service. It often is

a sign that old standards and prices are being rejected. The recent experience of an Indianapolis institution is significant. Here a refined product of hospital activity at a reduced rate has substantially raised the percentage of occupancy. Of course this single instance does not prove our theorem since many other hospitals have also shown an up-trend in private room occupancy in the last quarter. Nor is it conceded that the hospital rates of today are usually unfair. They are in fact most reasonable for the service rendered in the light of the standards of yesterday.

The aim for tomorrow, nevertheless, should be a finer service—a service so flexible that it will meet the needs and resources of more people and hence will result in greater volume and a lower unit price. A stubborn adherence to past methods of service and sales will mean to the hospital what it has meant to business—financial ruin. Quality of service to the sick determines its value—quantity, its price.

Standard Classified Nomenclature of Disease

PRESENT day morbidity and mortality statistics in this country are of doubtful accuracy if the methods of their compilation are any criterion. Not only does this statement apply to the data relating to the nature of illness and the cause of death which emanate from hospitals but to a much greater degree to such information furnished by physicians in general practice.

In hospitals, where the greatest factor of conciseness and accuracy is supposed to exist, no standardized system of disease nomenclature is to be found. If by an impossible stretch of the imagination all hospital patients were correctly diagnosed, even then an accurate compilation of these causes of disease and death could not be made because the same pathologic state is so often designated by a great variety of terms. Moreover, when it is considered that in many hospitals few postmortem examinations are performed and an even less number are secured in private medical practice, the bulk of diagnostic inaccuracy looms large even though filing systems were universally standardized.

The terms "myocarditis," "heart disease" and "kidney disease" are often observed as the death certificate cause of dissolution. Such diagnoses often serve as a means of evading the real cause of death because of a fear of causing the loss of insurance or as a cloak for an abysmal ignorance on the part of the doctor.

The Standard Classified Nomenclature of Disease which has been adopted by most medical and hospital associations meets most of the necessities for a complete and workable classification of disease. Moreover this system links up in a satisfactory manner with the International List of the Causes of Death. Many hospitals have adopted this system and if by so doing they assist further in bringing about a universal acceptance of some one system they will have performed a worth while service to the cause of the sick. Doctor Logie's comprehensive article on page 49 describes in detail the new system and how to use it.

"Where There Is Smoke . . ."

THE growth and prevalence of the smoking habit is one of the striking commentaries on our civilized life and no history of our generation would be complete that omitted mention of the factors that influenced its development. Although it is generally known that tobacco is physically active, though so often spiritually restful, people have rationalized themselves into believing that its harmful effects, if any, are of a volatile nature and that the commercialists, backed by the power of advertisement, may therefore be right, especially when the livelihood of so many persons depends on the success of the tobacco industry.

All this is by way of introduction to the administrator's problem of the physician who persists in smoking during the course of his visits to the hospital. For this practice of the medical man there seems to be no excuse. Tobacco in one form or another will be found on occasions in the best of our institutions, from the entrance corridors to the operating rooms, from the administrator's office to the nurses' home. Few seem willing to suspend for a brief period of time a habit that is so easily and, according to the advertisers, so pleasurably and inexpensively acquired, even if it will add to the general sanitary qualities of the hospital premises.

Thus we have a fire hazard, for live cigarette butts are known to be responsible for many fires and even more smoke, with all the panic that may come to those who rightly believe that where there is smoke there is fire. There is also the housekeeping problem of sweeping up cigarette butts and ashes in cases where the smoker has missed his aim—and who doesn't that has had the habit long enough? There is the disciplinary problem—"no smoking" signs all over the place, with an occasional ash tray to indicate a lack of faith on the part of the authorities in the value of rules, so often are they disregarded.

The parents of young house staff members too must be considered, for they cannot often afford "cigarette money" to make it possible for the juniors to ape their seniors and keep from being identified by their fellows as belonging in a class *sui generis*. What of the nurse who must taste the forbidden weed stealthily, with all the dangers of encouraging in her the development of an inferiority complex? The patients too—what is to be said of them? Why can't they have their fling while life is there—just because bed clothes are inflammable, or because "you must do as I say, not as I do"?

In short, is it desirable to limit or control the smoking habit within the walls of the hospital and, if so, how is it to be done?

Strikes

DURING the past months industry has been in a turmoil because of labor troubles. Again and again labor, dissatisfied with working conditions or rates of pay or irritated by some other real or fancied grievance, has laid down its tools. Violence and strife have frequently followed.

But the army of almost a million workers in the hospital field have continued loyally to carry on despite wage reduction, increased duties and many other distressing conditions which often justly prompt the spirit to rebel. All honor to this great army of men and women who proclaim by their acts that the cause of the sick towers in importance far above the cause of self. Neither night nor day, neither discomfort nor ease, no demand for personal sacrifice can blunt the devotion of those who give their service to those who cannot serve themselves.

Hospital Service at Hotel Rates

THE voluntary hospital is an organization not conducted for profit which is expected by the public to give away from 40 to 60 per cent of its services and yet to show no deficit as a result of a year's operation. If it demurs it is considered neither voluntary nor a hospital. What hotel could hope to exist under such a plan of operation? To be sure, gifts, endowments and other income secured from a generous public have in the past made possible an approach to meeting this problem. But such aid has ceased in a large measure.

Even in better economic days hospital rates never equaled those charged for like accommodations in the better hotels. One needs only to become ill in a strange city to learn that the expense of sickness in a hotel is often prohibitive. Even if room rates were approximately the same in these institutions the expense of nursing, food and medical care in the hotel would quite likely be double the cost of securing the same type of service in a hospital.

Few complain when bills for travel and pleasure are presented. But sickness, an unexpected and unpleasant event, often finds the average man fretful and unwilling to pay for his hospital care. The traditions of the past have caused the public to develop a false psychology of hospital service. Most assuredly free care must continue to be given to the deserving. But this can be done only to the degree which is determined by the gifts of the public.

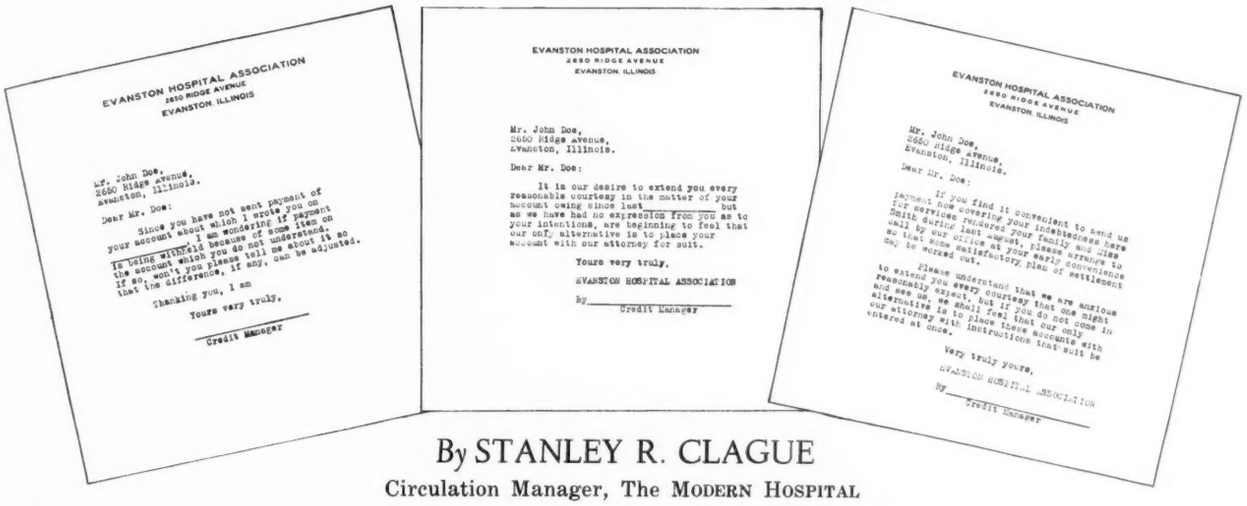
Hospital rates are only high when compared with a possible gratuitous service. Rarely does the traveler entertain a suspicion of unfair dealing when a bill for a hotel room alone is higher than that for a hospital room, which covers food and such services as nursing, laboratory study and expert medical attendance. The low cost of hospital care is a remarkable part of hospital service.

A Harmful Tradition

IT HAS been said that the common practices of today are the traditions of tomorrow. While it has become almost axiomatic that traditions are always praiseworthy and that they represent the brave and generous acts of our predecessors, yet they may be employed to justify policies that are unfair or unwise today.

It is a tradition that all who apply to the hospital shall be treated free. It has become the custom of hospitals to refrain from insisting upon payment for their services, because of an old tradition that says business and humanitarianism must not be mixed. But a new day has dawned. The hospital must either be paid for its services or must close its doors. The ward patient must be asked for a moderate rate for board. Tonsil patients must partly recompense the hospital for the care extended. Those who are able to pay must do so in order that those who cannot pay may receive care. Many administrators are frankly amazed at the promptness with which ward and out-patient fees are paid when firmness replaces a vacillating hesitancy in collection methods. It is a mistaken kindness to allow individuals so easily to pauperize themselves. The splendid tradition of service, which is the proud heritage of the hospital, is in no way being besmirched by the adoption of businesslike collection methods.

Collecting Overdue Accounts by Mail



EVANSTON HOSPITAL ASSOCIATION
2650 RIDGE AVENUE
EVANSTON, ILLINOIS

Mr. John Doe,
2650 Ridge Avenue,
Evanston, Illinois.

Dear Mr. Doe:

Since you have not sent payment of your account about which I wrote you on I am wondering if payment is being withheld because of some item on the account which you do not understand. If so, won't you please tell me about it so that the difference, if any, can be adjusted.

Thanking you, I am

Yours very truly,

Credit Manager

EVANSTON HOSPITAL ASSOCIATION
2650 RIDGE AVENUE
EVANSTON, ILLINOIS

Mr. John Doe,
2650 Ridge Avenue,
Evanston, Illinois.

Dear Mr. Doe:

It is our desire to extend you every reasonable courtesy in the matter of your account owing since last but as we have had no expression from you as to your intentions, are beginning to feel that our only alternative is to place your account with our attorney for suit.

Yours very truly,

EVANSTON HOSPITAL ASSOCIATION

By_____
Credit Manager

EVANSTON HOSPITAL ASSOCIATION
2650 RIDGE AVENUE
EVANSTON, ILLINOIS

Mr. John Doe,
2650 Ridge Avenue,
Evanston, Illinois.

Dear Mr. Doe:

If you find it convenient to send us payment now covering your indebtedness here for services rendered your family and self during recent months, please arrange to call by our office at your early convenience so that some satisfactory plan of settlement may be worked out.

Please understand that we are anxious to extend you every courtesy that one might reasonably expect, but if you do not come in and see us, we shall feel that our only alternative is to place these accounts with our attorney with instructions that suit be entered at once.

Very truly yours,

EVANSTON HOSPITAL ASSOCIATION

By_____
Credit Manager

By STANLEY R. CLAGUE
Circulation Manager, The MODERN HOSPITAL

EVERY hospital superintendent is anxious to collect accounts as quickly as possible at the least possible expense and in so doing to retain the good will of the debtor. A letter, for many reasons, does the job better than other collection methods employed today because it can be made forceful enough to produce results and yet it need not be offensive. The collection agency or the hospital's own collectors, on the other hand, are not so easily controlled, particularly if they are working on a commission basis.

The letter will reach the person it is intended for while the collection agent necessarily wastes many calls.

Making an Effective Appeal

In preparing a series of letters to use, the following suggestions may be found helpful:

1. Plan for a letter to go out every two weeks. If you are lax in following up the debtor, he will decide you are not in much of a hurry for the money and will take his time in paying.

2. Use different signatures on your letters. Those of the bookkeeper, the auditor, the superintendent and the hospital treasurer are suitable for this purpose.

3. Personalize the letters so they give the impression that the account is being individually handled. If there are too many letters to have them typed in the hospital office, investigate the cost of having them electrically typewritten by a local letter shop.

4. Do not let payments lapse without sending a reminder. This applies to the many hospitals that urge the debtor to work out a plan of paying so much a week or every two weeks.

A few letters that have been used effectively by hospitals to collect past due accounts are shown in the layout above. Others follow:

Mr. Albert Blank,
1025 Ocean Street,
Chicago.

Dear Mr. Blank:

Your attention is again called to a balance of $..... due on your hospital account, for which we would appreciate payment.

If you are unable to make full payment at this time we ask that you arrange to make regular payments each month.

By doing so your balance will gradually be reduced and in time fully paid.

Trusting that we may receive a remittance within the next few days, we are,

Yours very truly,
AUGUSTANA HOSPITAL
Credit Manager

Mr. John Blank,
Drexel Boulevard,
Chicago.

Dear Mr. Blank:

Enclosed is a statement of your hospital account showing a balance of $193 still due. Can you not arrange to send us a small payment once in a while, Mr. Blank, to help cut down this amount?

We know you are as anxious as we to get this matter cleared up and will appreciate $5 and $10 on account whenever you can send it in.

Yours very truly,
THE CHICAGO MEMORIAL HOSPITAL
Superintendent

Mr. John G. Owen,
6356 Blackstone Avenue,
Chicago.

Dear Sir:

You have been reminded previously of the fact that your account is long past due. We have not heard from you as to why the account has not been paid, nor have we received your check.

We assume that there may be some good reason why you have not sent your payment. If there is, won't you please give us the details now, before the amount open becomes any longer past due? Please let us have your reply by return mail.

Very truly yours,
ST. LUKE'S HOSPITAL
F. T. Muncie
Comptroller

Mr. Harry D. Young,
2986 Euclid Avenue,
Cleveland.

Dear Sir:

You have not paid your account with Mercy Hospital amounting to $85.

You have already enjoyed the utmost extension of time we are able to grant. If, therefore, settlement is not forthcoming by return mail, we shall with deep regret come to the conclusion that you wish us to take other measures, and shall govern ourselves accordingly.

Very truly yours,
Collection Service
THE CLEVELAND HOSPITAL COUNCIL

Mrs. Hilda Jackson,
234 Porter Avenue,
Rye, N. Y.

Dear Madam:

We have not yet heard from you concerning the above bill. The hospital has been willing to make this payment as easy as possible for you. We still wish to be considerate and do not want to cause you any unnecessary hardship. However, you have sent no money and have made no explanation.

Will you not please communicate with us at once? We will wait a short time longer before taking further action.

Yours very truly,
GRASSLANDS HOSPITAL
B. M. Bamber, R.N.
Administrative Assistant

Operating Costs Can Be Reduced by Modernization

There are many ways that hospitals can reduce operating expenses through modernizing their equipment. Helpful suggestions on this subject are offered in a recent issue of *Buildings and Building Management*, as follows:

A popular way to cut heating costs is to install automatic stokers. Stokers reduce fuel costs by permitting the use of the smaller sizes of coal and the maximum control of important factors, such as proper draft, correct depth of fuel bed and distribution of fuel. They frequently serve to reduce labor costs and may also increase the capacity of the boiler.

A conspicuous example is a large department store in which the rehabilitation of the boiler plant, consisting mainly of the installation of chain grate stokers, resulted in an annual saving of $30,000.

Another major source of waste is in the control of the supply of steam in the heating system. Here again the introduction of automatic equipment offers great possibilities in comparison with the uncertainties of hand control.

Uninsulated steam pipes are another source of waste. It has been calculated that bare pipes may have enough radiation surface to make up 25 per cent of the radiation in the entire system. Leaking traps and valves are also a source of loss, particularly in buildings that have suffered from neglect.

The boiler itself may be a source of heavy loss. Boiler loss may come about through infiltration of cold air through cracks in boiler settings or baffle walls or through the accumulation of soot and scale.

The article tells of a moderate sized building in Philadelphia which found it worth while to spend approximately $11,000 in changing its electrical system, the major part of the expenditure going for high tension transformers. This change brought annual savings ranging from $5,500 to $6,500—enough to retire the investment in two years.

While there are many more obvious reasons for replacing obsolete elevators, the possible reduction in operating costs should not be overlooked. As an illustration, one office building which is now changing its elevators anticipates annual savings of at least $20,000 in operating costs. And the records of other institutions indicate that these figures are justified.

Town and Hospital May Together Provide Isolation Service

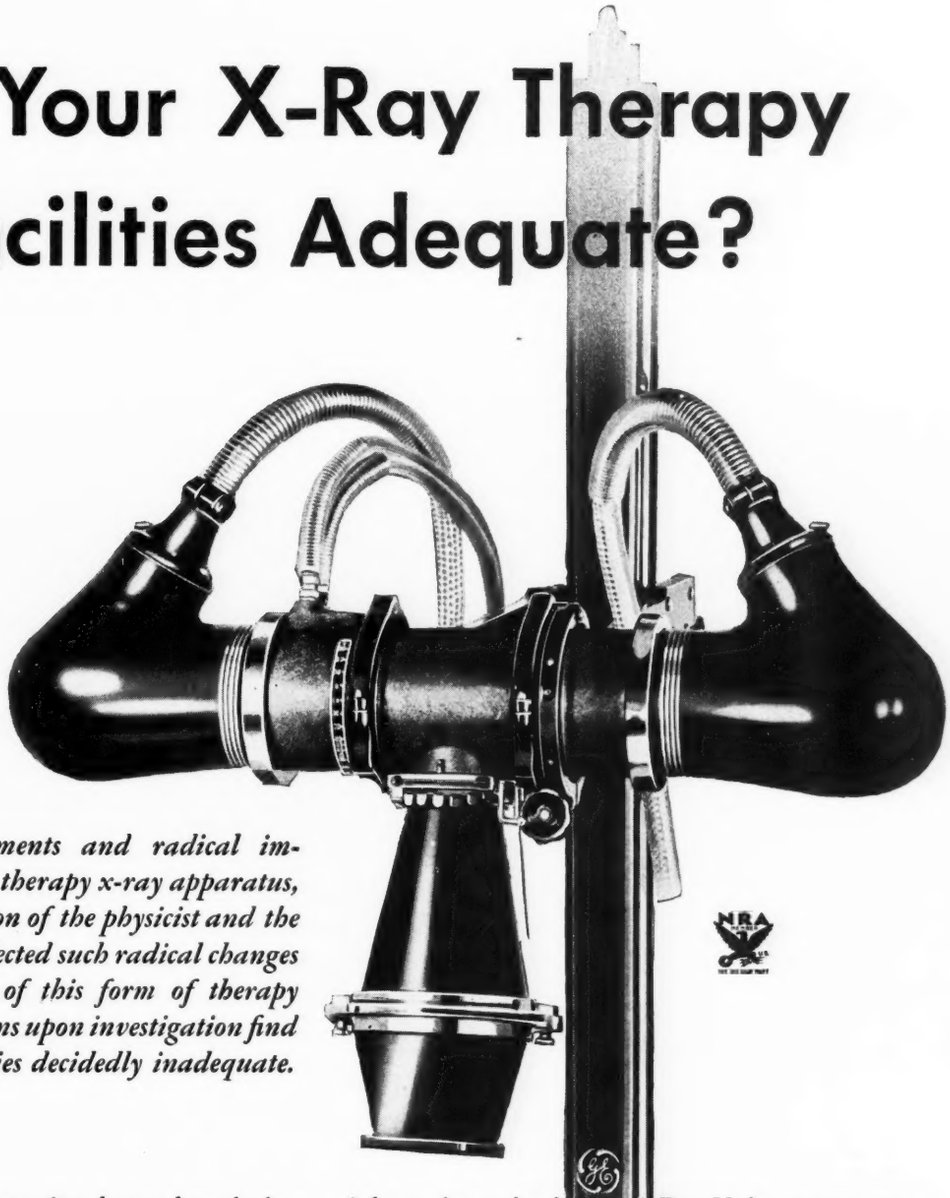
The utter lack of isolation facilities in nearly all rural areas and the surprising lack of this type of accommodation in many larger communities have led one of the study committees of the Canadian Hospital Council to consider the subject.

Although improved control of communicable disease has lessened the incidence of many of these illnesses, this is offset somewhat by the increased number of transients.

The Canadian committee on small hospital problems thinks the solution lies in an arrangement between the town and the public hospital, whereby the town builds a completely isolated wing or a separate annex and the hospital supplies the nursing and dietary services at cost.

City councilmen must recognize their responsibilities in this direction, the committee declares. It is not economical to build a separate institution in a small town, because it would be used only intermittently, but it is not fair to other patients if, without proper isolation accommodations, the hospital accepts cases of communicable disease.

Are Your X-Ray Therapy Facilities Adequate?



Important developments and radical improvements in deep therapy x-ray apparatus, through collaboration of the physicist and the radiologist, have effected such radical changes in the application of this form of therapy that many institutions upon investigation find their present facilities decidedly inadequate.

THE startlingly increasing demand on the hospital for x-ray therapy in its various forms is well known to every hospital superintendent and staff. In the light of present day knowledge and what research has made available in improved equipment, can your hospital offer this type of service according to the newer standards?

We are modernizing the facilities for hospitals everywhere — with the most complete line of deep therapy apparatus in the history of our organization — and can do the same for your institution. Forty years' experience in the manufacture of x-ray tubes and equipment is assurance that we are competent to serve your best interests.

Ask us about the K[illegible] X-Ray Unit, at present one of our most popular hospital models. This unit offers a combination service, i. e., for x-ray diagnosis up to 100 kv.p., at 100 ma., in addition to x-ray therapy up to 200,000 volts at as high as 30 ma. It serves ideally as a nucleus for future expansion, as with the addition later of a capacitor unit the range of x-ray therapy may be increased to 300,000 volts at 10 ma. Recent installations include operation of the X P T Coolidge tube in oil in a shock-proof container.

Write for further information — let us advise with you without obligation.

GENERAL ELECTRIC X-RAY CORPORATION

2012 Jackson Blvd. *Branches in Principal Cities* **Chicago, Illinois**

How a Prize Winning Hospital Day Celebration Was Conducted

By LEONORA LACEY WARRINER
Glendale Sanitarium and Hospital, Glendale, Calif.

WHEN it was decided to celebrate National Hospital Day in Glendale, Calif., last spring, two hospitals—Glendale Sanitarium and Hospital and Physicians' and Surgeons' Hospital—joined forces in planning the program that was later awarded first prize by the National Hospital Day committee of the American Hospital Association.

The committee in charge of arrangements first called on local newspaper men and outlined their plans. The mayor and members of the city council were asked to support the program and to participate in the parade. The chamber of commerce also promised to take part and to arrange for publicity. Local radio stations were contacted and radio publicity was begun.

Hospital posters were placed in Glendale store windows and postcards were mailed to a selected list of patients inviting them to attend the celebration. Local ministers were invited to announce Hospital Day in their churches. Glendale physicians spoke before women's clubs the week before Hospital Day, basing their talks on materials supplied by the National Hospital Day committee and adding local items of interest. The two local high schools were invited to submit posters on medical subjects and prizes were offered by the sanitarium.

A real estate man donated the use of an empty store on the main street of Glendale for several days before the celebration. The windows of this store were arranged as hospital rooms and here each day nurses from the two hospitals demonstrated methods of making beds, feeding patients, dressing and washing babies and bandaging. Furniture and surgical equipment were supplied by local stores and a surgical supply house. Posters lent by the health department of Los Angeles were displayed in the store. Literature from both hospitals and programs of the Hospital Day activities were distributed at the store.

Firms owning large trucks lent these for use in connection with the floats. Cars were loaned by automobile agencies. Airplanes were borrowed from the local airport. Riding academies supplied horses and buggies. An old-fashioned buggy was secured from a livery stable and the oldest automobile in California was loaned and driven by its

The picture at the top of the page shows some of the characters in a "Pageant of Nursing." The characters are, left to right: a modern nurse, a Red Cross nurse, Clara Barton, Florence Nightingale and Sairey Gamp.

This happens often—when you provide PALMOLIVE

NURSE: Those little attentions certainly make a hit with patients!

DOCTOR: — and they have a real bearing on every patient's recovery!

YOU know how much the well-being of your patients can be influenced by their surroundings ... how those many "little" things, from the way in which meals are served, right down to the kind of soap you provide, can "work" together to create the cheery, home-like atmosphere so necessary to every patient's recovery.

Naturally a woman is pleased when she finds that the soap provided for her personal use is her *favorite* complexion soap, the kind she uses in her own home — Palmolive! Even when she says nothing, your thoughtfulness does not pass unnoticed.

Men, too, appreciate Palmolive's velvety lather... the soothing, cleansing action of its rich olive and palm oils. And they like its cool green color!

Why not join the scores of hospitals that have made Palmolive *the* soap for patients' personal use? It comes in *five* special sizes, so that you can provide for each patient the size that will most economically meet his or her needs while in your care. And Palmolive costs no more than ordinary soaps! Send for prices today.

●

Other Colgate-Palmolive-Peet soaps that can save you money ... do better work! PHOSFOAM for your laundry. SUPER SUDS for *thorough* cleansing of laboratory equipment. OCTAGON SCOURING CLEANSER for maintenance of floors. And many others — described in our booklet — "If it's soap you need — we have it." Your request will be answered by return mail!

COLGATE-PALMOLIVE-PEET COMPANY

105 Hudson St., Jersey City, N. J.

CHICAGO · MILWAUKEE · KANSAS CITY · SAN FRANCISCO · JEFFERSONVILLE, IND.

This shows the rear end of a float that carried an airplane, usually flown by the young man in the picture who is a Glendale Sanitarium nurse.

owner, acting as chauffeur for a doctor. Two thousand dollars' worth of decorations that had been used in a Los Angeles flower parade were made available free of charge and were used to decorate the floats.

The parade was led by the chief of police acting as grand marshal. In a "Pageant of Medicine" prominent Glendale physicians portrayed the following characters: Hippocrates, "Father of Medicine"; Indian medicine man; padre; 17th Century barber surgeon; 1890 doctor on horse; 1896 doctor in buggy; 1901 doctor on bicycle; 1908 doctor in old car; 1917 overseas surgeon on motorcycle; 1933 doctor in modern car; the woman physician; doctor in airplane, and missionary doctor. These doctors arranged and paid for their own costumes and were responsible for seeing that they were historically correct.

Nurses of the Glendale Sanitarium and Hospital portrayed characters in a "Pageant of Nursing." The characters represented were a nun, Sairey Gamp, Florence Nightingale, Clara Barton, an old-fashioned nurse, a Red Cross nurse, a modern nurse and a missionary nurse.

Physicians' and Surgeons' Hospital presented a Florence Nightingale float and another depicting an operating room scene with patient, nurses and doctor in action. Glendale Sanitarium presented an obstetric float showing mother, child, nurse and doctor in a model hospital room and one showing patients convalescing in the sanitarium gardens.

Other groups participating in the parade were the city health department, the Boy Scouts, overseas nurses, Red Cross, American Legion, Women's Legion, Medical Auxiliaries, Metropolitan Life Insurance Company, the city ambulances and the city fire department.

Two of the characters in a "Pageant of Medicine." The Indian medicine man, (left) is followed by a padre. Each doctor supplied his own costume.

SAVE TIME, MONEY AND WORK *on Meal Preparation . . . with* ALL *the Hobart Machines in Your Kitchen*

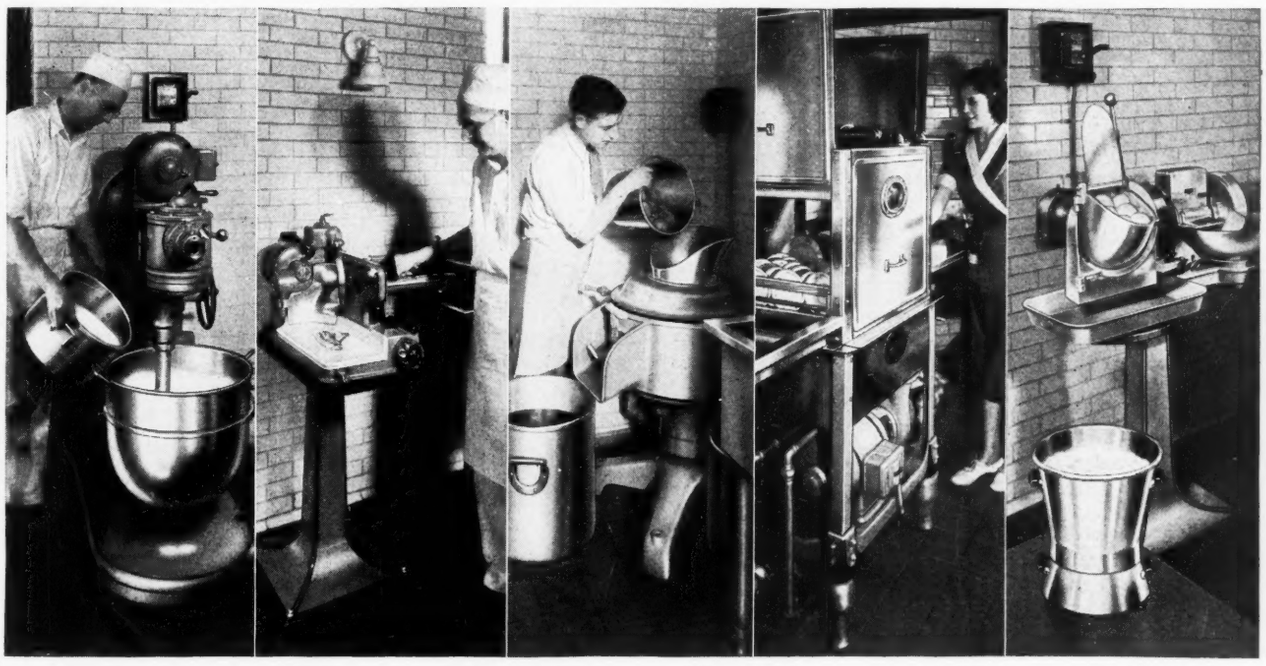
How to prepare a WIDER VARIETY of more appetizing *food that tempts and satisfies patients* . . . and do it ECONOMICALLY . . . is completely answered by Hobart Electric Kitchen Machines. If one (or two or three) of these machines is aiding you now . . . FIND OUT *how much greater savings* you can get from *full* Hobart Equipment!

For instance: The latest addition is the Hobart Air Whip (electric whipper) which produces a *larger volume* of better Whipped Cream, for salads and desserts of MANY kinds. This can be furnished either as a Unit or as an Attachment for Hobart Mixers now in use. Only Hobart offers this combination!

As an Attachment the Air Whip not only whips cream so incomparably, but offers New Aerating Advantages in Many Regular Mixing Bowl Operations. Mail coupon for new and interesting Hobart book. No obligation!

THE HOBART MFG. CO., TROY, OHIO

London Paris Toronto



MIXERS	SLICERS	POTATO PEELERS	DISHWASHERS	AIR WHIPS	FOOD CUTTERS
All-around machines that save TIME and improve QUALITY.	Regulate your costs by uniform slicing, meats, bread, cheese.	Save great losses by peeling only "skin deep."	Clean and sterilize china, glass, silver. Reduce breakage.	Electric whippers produce better whipped cream and more of it.	Cut meats, nuts, vegetables, fruits, with lightning speed. Operate attachments.

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Electric Kitchen Machines

all come in a wide range of sizes, to suit the needs of any kitchen. All are covered by ONE sincere, far-reaching Guarantee. All are serviced by ONE factory-trained Service Organization, Nationwide in scope.

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Dept. I-64, Troy, Ohio

For greater kitchen economy, we would like to see copy of latest booklet, "Food Preparing Equipment," without obligation.

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The Problem of the Month

What Vacations Should Be Given Hospital Personnel?

HAS the time now come to abolish vacations without pay or will it be necessary to continue this type of economy for another year? With the approach of the vacation season, the hospital administrator must give thought to this question.

Some hospitals have continued to give vacations with pay throughout the depression. Others have found it necessary to shorten vacations. Still others have been obliged to abolish paid vacations altogether. Some hospitals give one week with pay while others give a month. Vacation periods vary for different classes of hospital personnel.

What do you think is a fair vacation schedule?

Rev. H. L. Fritschel, Superintendent, Milwaukee Hospital, Milwaukee:

"All department heads, supervisors and all other employees should be given two weeks' vacation with pay after completion of one year of continuous service. When more than two weeks' vacation is granted no salary should be paid for such time. Anesthetists and pathologists should have a month's vacation with pay.

"Due to financial difficulties during the past two years, employees at Milwaukee Hospital have not been paid for vacations with the exception of anesthetists who received two weeks with pay."

W. G. Christie, Superintendent, Presbyterian Hospital, Denver:

'I believe it good economy for the hospital to give vacations to all personnel. I feel keenly that if an employee has been faithful and has attended to his work during the year, the management should extend him a vacation which will permit him to get away from the atmosphere of the institution to be rested and refreshed in order that he may return to his work with new vigor and increased enthusiasm.

"Those department heads in the hospital whose hours are indeterminate, whose responsibility is heavy and whose positions require close application should be given one month; assistant department heads, from two to three weeks; general duty graduate nurses, when on eight-hour duty, two weeks; office personnel, maintenance personnel, kitchen and laundry help and similar types of employees, two weeks.

"I believe in going a little further and establishing some holidays in the institution, at least seven during the year, and, when possible, allowing the personnel to enjoy these holidays. In our institution when office personnel are not able to enjoy privileges of holidays, we add these seven holidays on to the two weeks' vacation.

"I believe that vacations pay large dividends to any organization. Business recognizes this fact and the hospital should be no exception."

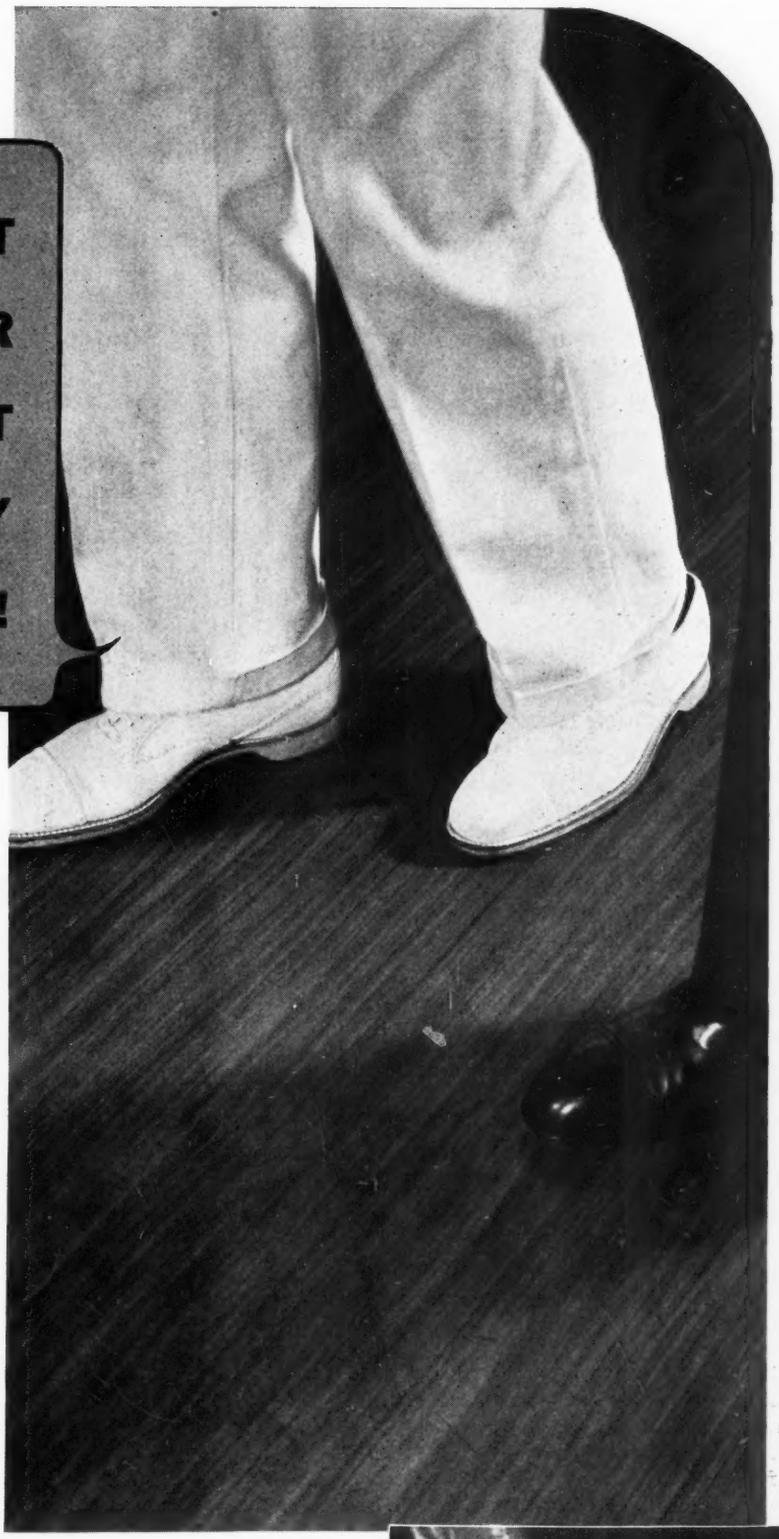
Robert Jolly, Superintendent, Memorial Hospital, Houston, Tex.:

"Every hospital should give its employees some vacation with pay. This time is more than paid for in increased loyalty to the institution. Hospitals that have been forced to cease giving vacations with pay should, if at all possible, go back to the original plan.

"There is a division of opinion about the length of vacations with pay. Until six or seven years ago all graduate nurses at Memorial Hospital were given a month's vacation, whereas the clerical force, maintenance personnel and technicians received two weeks. Later the nurses' vacation was reduced to two weeks.

"In 1932 we were obliged to reduce vacations of nurses, clerical workers, technicians, engineers and carpenters to ten days and those of maids, porters, laundry help, orderlies and kitchen personnel to one week. From a financial standpoint we were hardly justified in continuing to give vacations but we felt that the institution and all of its workers would be benefited by giving some vaca-

EVERY PATIENT IS BRIGHTER SINCE WE GOT THESE CHEERY NEW FLOORS!



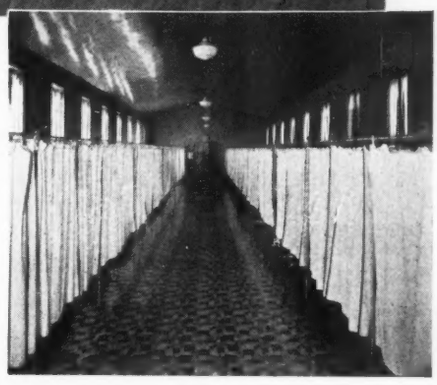
NO patient *wants* to be in the hospital . . . or to be constantly reminded that he's there. So modern hospitals do their very best to be homelike. That's one reason why so many of them have Armstrong's Linoleum Floors.

Armstrong's Floors are bright, cheery, colorful—a definite aid to convalescence. They banish gloom, dispel every hint of drabness. New linoleum floors work wonders in modernizing and beautifying old hospitals.

Moreover, they muffle the tramp-tramp of feet, and the clatter of dropped things. They provide underfoot comfort for nurses and attendants. They clean easily and reduce maintenance costs—especially when waxed with Armstrong's Linogloss.

Armstrong's Linoleum Floors are worthy of your further investigation. Hundreds of hospitals, large and small, in every part of the country, have found them so. Send for our book "Public Floors of Enduring Beauty." Just address Armstrong Cork Company, Floor Division, 1210 State Street, Lancaster, Penna.

Ward in the recently modernized French Hospital, San Francisco. Cheerful new floors of Armstrong's Linoleum were specified by the architects, Fabre and Hildebrand.



Armstrong's

LINOLEUM FLOORS

APPROVED BY THE AMERICAN COLLEGE OF SURGEONS

tion with pay. We shall probably not be able to extend the vacations this year as we must take up the slack that has been created during the past three years."

Ruth E. MacMaster, Superintendent, Huntington Memorial Hospital, Huntington, W. Va.:

"This is a problem that each hospital must work out in its own individual way. I sincerely feel that it will be impossible to abolish vacations without pay for the next year as hospital burdens have not yet been lightened and it is doubtful if much change will take place within the next twelve months. Of course hospitals in different localities have their own peculiar problems to meet and solve.

"I suggest the following plan which was used last year in Huntington Memorial Hospital:

"Department heads and assistant department heads were given from two to four weeks. I feel that two weeks with pay is adequate and if these employees desired an extension of time this was granted without pay.

"Graduate general duty nurses were given two weeks without pay or its equivalent in week-ends with pay. The average general duty nurse does not stay on the staff for a twelve-month period. I believe that for every six months of time served, general duty nurses should be given a week with pay.

"Office clerks, stenographers and telephone operators, when they had been in the service for a year or more, were given one week with pay or the equivalent of two weeks in week-ends with pay. Due to general economic conditions, not many of our employees desired a longer period but preferred to take up the time in week-ends beginning Saturday noon and reporting for duty Monday morning.

"Maintenance personnel—maids, porters, laundry help, engineers, carpenters and orderlies—could not be given vacations with pay and they did not desire the regular vacation period without pay. We therefore worked out a plan whereby we gave them week-ends, days and additional half days at intervals to average a two weeks' vacation period with pay. This plan proved most popular with this class of employees.

"Laboratory and similar technicians were given two weeks with pay and those who requested a longer period were given an extension of time without pay. A short period of time can be arranged for by relief among members of the organization but a longer period works a hardship on the remaining personnel or requires the employment of substitutes.

"Kitchen personnel were given the same vacations as were granted to the maintenance staff."

"New Poor" Are Now a Hospital Responsibility

The "new poor" are a new responsibility of New York voluntary hospitals. Answering the question, What kind of people and families are being helped by the free or partly free service of the fifty-six hospitals of the United Hospital Fund, the fund has announced the results of a study on this subject.

An inquiry involving 3,000 patients out of 212,882 ward patients in the fund hospitals, and 290,757 patients of all classifications, showed fifty-two occupations represented among the heads of families of ward patients in the group studied. The study disclosed that not only laborers, artisans and industrial workers, but many business and professional people, are in need and are unable to pay for hospital care. They represent the "new poor."

The outstanding fact disclosed by the survey was that the largest number among the 3,000 ward patients needed free or partly free care because they are out of employment. The group of 327 patients who are not employed represented 11 per cent of the whole. If the same percentage of unemployed patients exists among all the ward patients in the fifty-six hospitals of the fund, not less than 23,000 persons require free or partly free care in the fund hospitals because they are out of work.

The patient who can pay only a little toward the cost of hospital care, the white collar workers, the business and professional people who now have to seek free or partly free care, often for the first time, represent an increased demand upon the facilities of hospitals.

Many of the patients who now apply to the hospitals for care are people of refinement and culture. They have had means and earning capacity, but now have neither. If they can pay only $0.50 or $1 a day, they are not admitted to the city hospitals which are for patients who cannot pay even that much. The "new poor" must rely upon the voluntary hospitals as a source of refuge in time of illness. The actual cost of their care is from $4 to $6 a day.

Writing Ink for Permanent Records

After conducting a large number of experiments, the U. S. Bureau of Standards has found a writing ink that apparently will not damage paper, according to *Technical News Bulletin*. After being inked, papers were subjected to an aging process by the application of heat. When heated, the ordinary acid type of writing ink caused rapid embrittlement of the papers, in some cases the folding endurance being reduced 50 per cent.

The type of ink believed to be satisfactory is alkaline; in it ammonia replaces the acid in the usual type of ink. There was practically no embrittlement of papers which were inked with this preparation when they were subjected to an application of heat.

"IT IS IMPERATIVE THAT AN AUTOMATIC FIRE ALARM SYSTEM BE INSTALLED..."

SO STATES a bulletin of the National Board of Fire Underwriters in a discussion of hospital fire hazards. When human lives are at stake, fire must be discovered promptly and an accurate alarm sent to fire headquarters without loss of a single moment.

The stage is set for tragedy in every hospital that fails to provide automatic facilities for the prompt discovery and reporting of fire.

The AERO Automatic Fire Alarm detects fire in the incipient stage and notifies hospital officials and the fire department quietly and quickly. Trained forces are summoned to preserve calm or arrange for the removal of inmates. AERO is protecting large and small hospitals in all parts of the country. It is DEPENDABLE because it is installed and maintained by A. D. T.— a nation-wide protection organization.

Ten aged women died in this disastrous infirmary fire

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"feels fire like your finger feels a flame"

● Send for a copy of this book. It tells how AERO operates and how it is protecting life and property everywhere.

Maintenance, Operation and Equipment

Conducted by JOHN C. DINSMORE *and* DR. R. C. BUERKI

New Door Provides Easy Access to Concealed Pipes

By CARL P. WRIGHT, JR.
Department of Hospitals, New York City

AN IMPROVED flush steel access door for conveniently reaching concealed pipes, valves and traps in suspended ceilings and wall pipe chases was recently placed upon the market.

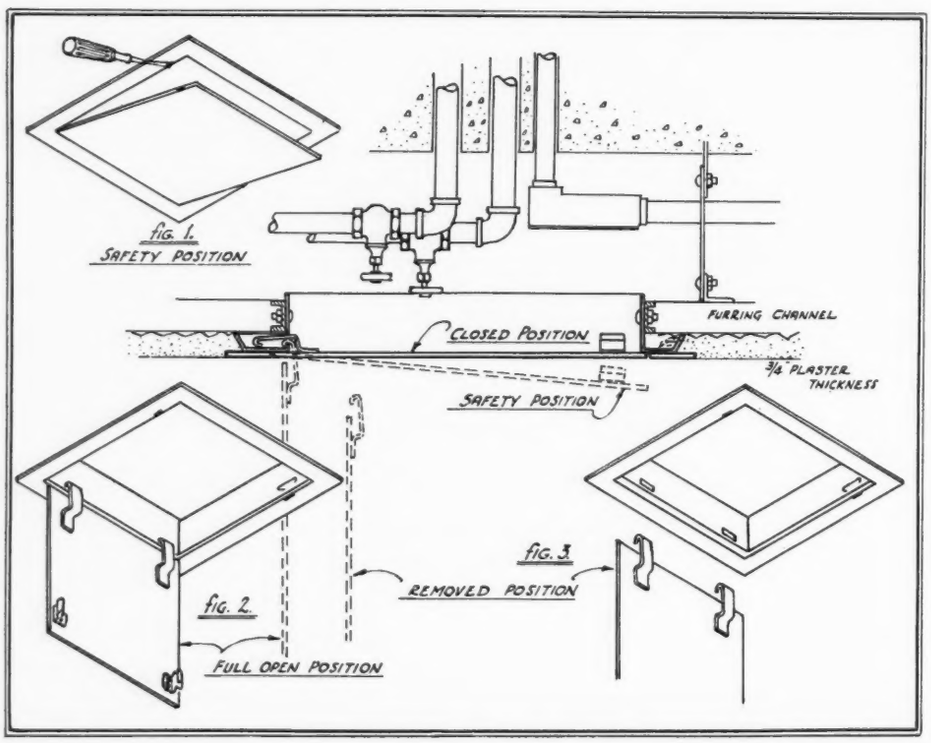
Particular attention has been given in the design of this door to the necessity for easy, quick opening. This matter is of real importance when breaks occur in water supply, steam and refrigerating lines, valves or fittings. It is possible to open the door, remove it entirely, replace it and lock it in a few seconds.

The door is so designed that it is forced open by means of a wedge or leverage action with a small screw driver. It does not swing down with the possible result of knocking the mechanic from the ladder. Nor does it drop out of the frame with possible damage to the floor covering. Instead it opens only about three inches. Then by a slight forward pull it can be swung to an opening of more than 90 degrees and a short lift of the door permits it to be entirely removed from its frame.

In its partly open or safety position the door also serves to ventilate the ceiling or pipe chase areas and allows for thorough and quick drying.

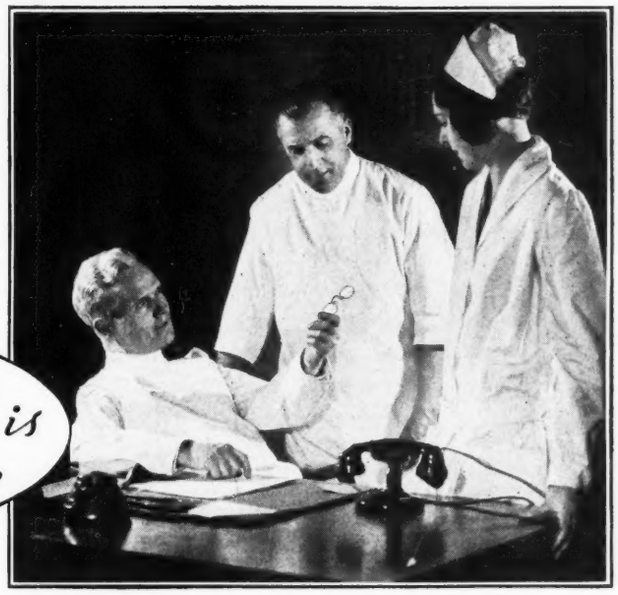
When the door has been removed from the frame there is no obstruction to the mechanic's working or entering the frame to gain access to suspended ceiling areas. There are no lugs, catches or other gadgets to injure the mechanic or tear his clothing.

When installed in suspended ceilings or walls, flush with the plaster and painted the same as the surrounding wall or ceiling finish, the door is inconspicuous but readily accessible should it become necessary to reach a broken line instantly.



The door and frame are made of heavy 12-gauge furniture leveled steel and have a baked priming coat. They are made in a variety of stock sizes sufficient to fit nearly every need. Special sizes may be had on short notice or the frame may be fitted with perforated grilles or register faces.

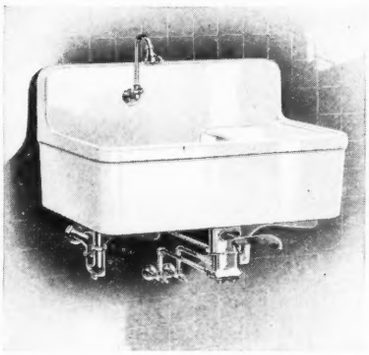
The device is also well adapted to fuse and switch boxes where a smooth, flush inconspicuous steel door is desirable. Replacement of existing access doors can be made by the maintenance crew.



"That new Crane Sink is just the thing"

Even Crane has never before offered such a utility sink for the Dressing and Treatment Room, Out Patients' Department, Instrument and Sterilizing Room, Drug Department, and Mortuary.

Of solid china, it will never check, craze, or stain. An integrally molded drain shelf accommodates instruments and utensils. A gooseneck spout with rose spray is ideal for scrubbing up; the doctor may scrub to the shoulders without touching any part of the sink or spray.



Knee action controls the water supply, blending it to tepid, hot, or cold. The outlet permits washing in running water or filling the basin with antiseptic solution. This sink, as in all Crane plumbing fixtures, is insurance against water pollution through back siphonage.

The Trustees of any progressive hospital will appreciate the value of such a sink as this in any modernizing program.

CRANE

CRANE CO., GENERAL OFFICES: 836 S. MICHIGAN AVE., CHICAGO, ILL. · NEW YORK: 23 W. 44TH ST.

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MAINTENANCE, OPERATION AND EQUIPMENT

How to Get Food to the Patient at the Right Temperature

AN EXHAUSTIVE study of the most desirable temperatures for various types of food at the time of service, coupled with a careful analysis of actual food temperatures at each step from the stove to the patient, has just been completed in ten representative Chicago hospitals.

This study was made by Zoe Dorothy Wertman in connection with her master's thesis in the department of home economics and household administration of the University of Chicago. The results of the study are presented here in brief.

By actual and repeated tests the most agreeable temperatures for the various types of food at the time of consumption were found to be as follows:

Foods Tested	*Most Agreeable Temperatures*
Soup:	
Highly seasoned	140° F.
Not highly seasoned	150
Clear broth	160
Meat:	
Roasted	130
Boiled	130
Stewed	140
Creamed	140
Potatoes, all forms	140
Vegetables:	
Stewed tomatoes	150
Peas in cream	150
All others	140

The accompanying table and graph show the temperatures of the food items at the various stages from the stove to the patient and the temperature that the food should be, ideally, when it reaches the patient.

Study of the data collected shows that in most of the hospitals the food is actually served markedly below the desirable temperature. Soup, with few exceptions, was the only food that reached the patients agreeably hot. Actual temperatures of food served to patients are shown in the accompanying table.

Only two of the hospitals studied had efficient schedules for handling the hot food from the time it was cooked until it reached the patient. In others, hot food was held for unnecessary lengths of time at various points in the service. Data from hospitals where persons responsible in the service kitchens had duties elsewhere when the hot foods were at hand to be served showed long periods of holding and great loss of heat at this point in the service.

Hospitals having service kitchens held their food for 11.7 minutes more than did hospitals having central food service, and the food showed 9.4° F. greater loss of heat. Most of the hospitals held prepared food for long periods in the main kitchen, the average period of holding at this point being 30.3 minutes. This long period of holding was made necessary in some hospitals by the schedule of work, while in others there was no apparent reason for holding the food so long.

Hospitals serving in the main kitchen held their food at that point for 31.5 minutes, three minutes longer than food was held in hospitals having service kitchens. The loss of 29.4° F. during the holding in the main kitchen was the greatest loss of heat occurring at any point in the service.

Little delay was reported during the delivery of foods from the main kitchen to the various serving units, the average time required being 5.5 minutes, although central service required only 2.5 minutes. There was an average of only 9.2° F. of

TEMPERATURES AT WHICH THE VARIOUS TYPES OF FOOD WERE ACTUALLY RECEIVED BY PATIENTS IN THE TEN HOSPITALS

Hospital	*Soup*	*Meat*	*Potatoes*	*Vegetable*
1*	160.0° F.	112.0° F.	115.9° F.	116.7° F.
II	144.2	130.1	128.4	125.7
III	132.5	117.8	122.9	123.4
IV	161.2	114.9	127.8	135.7
V**	143.7	120.4	129.5	120.1
VI**	136.5	120.0	123.4	123.4
VII**	135.9	123.1	129.5	124.6
VIII-A	129.6	115.9	121.0	118.1
VIII-B	144.4	125.9	133.8	126.4
IX-A**	154.0	133.7	134.8	124.8
IX-B	159.8	128.0	137.4	130.5
X-A	132.4	110.4	117.3	113.6
X-B*	132.0	126.0	140.6	125.6
Average	143.6	121.4	127.9	123.7
Ideal	150.0	135.0	140.0	145.0

Hospitals not marked have service kitchens.
*Hospitals having central kitchen apportioning and service kitchen assembling.
**Hospitals having central service.

It's Easy Now

To Include Vitamin B in Diets For Children and Grown-Ups

To you, as a director of diets, two facts are evident:

1. A normal appetite is impossible without vitamin B.
2. Refined foods, most commonly used by modern Americans, are low in vitamin B.

You, therefore, will appreciate the advantages offered by "double-rich" Ralston. This tempting cereal, which provides the abundant body-building elements of finest whole wheat (coarsest bran removed) is also enriched with added pure wheat germ *—to make it two and one-half times richer in vitamin B than natural whole wheat.*

Children and grown-ups welcome the natural golden color—the delicious flavor of this cereal which cooks in five minutes —costs less than one cent a serving.

For the Research Laboratory Report and samples of "double-rich" Ralston Wheat Cereal for testing, use the coupon below.

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Please send me copy of your Research Laboratory Report on the new "double-rich" Ralston Wheat Cereal and samples for testing.

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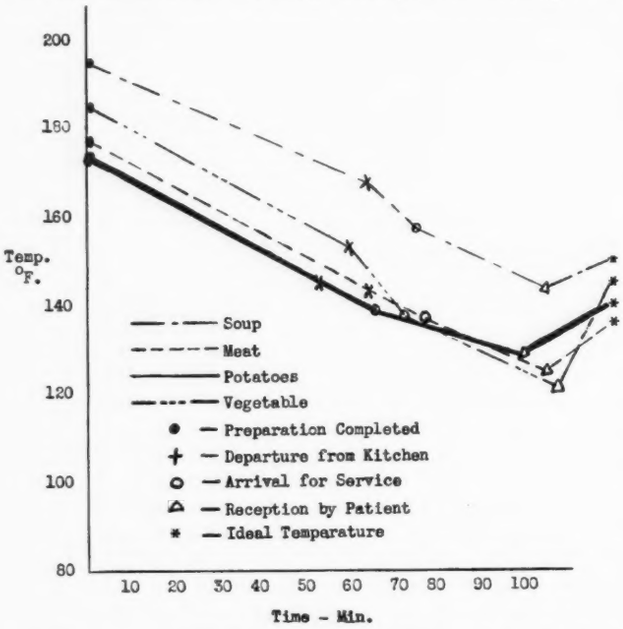
heat lost during this period. Hospitals having service kitchens held their foods in these kitchens 11.3 minutes before the serving of trays was started, the reason for this delay usually being that the person in charge of serving trays was detained by other duties.

Efficient methods of handling food in the main kitchen, as employed in a few of the hospitals, shortened greatly the period of holding at that point. Since certain hospitals showed in the main kitchen a period of holding six times that of others it is evident that improvement can be effected.

In each hospital studied some period in the food service had been worked out systematically and



results were satisfactory from the point of view of loss of heat and period of holding. On the other hand, no hospital studied had the entire service so organized as to avoid all long delays, usually accompanied by great loss of heat. In most instances the heat loss was directly related to the length of the service period.

The equipment as used did not maintain the foods at agreeable temperatures when they were held for long periods of time. The bain-marie was shown to be less efficient than the steam table; carts heated by charcoal were found to require recharging unless the service period was short, and it was shown that electric food carts needed larger heating elements.

All foods held by ordinary methods were shown to lose their heat quickly after the preparation was completed. Hospitals making effective use of good equipment were able to hold the foods with much less heat loss than the average. Data for the period of holding in the main kitchen showed 6.4° F. less loss of heat when foods were held in the steam table than when they were held in a bain-marie. The loss of heat in foods held in electric food carts varied widely. During the holding in the service kitchens foods held in the best carts lost 3.4° F. more heat than those held in good steam tables.

Immediately upon release of this thesis the data were briefed and given to the head of the food service department of one of the hospitals studied, who found that food temperatures were not up to the ideal reported. Each dietitian in the department then independently rechecked temperatures and independently set up her own optimum temperatures. While there were slight individual variations, there was general agreement on the ideal temperatures as set up in the thesis.

Having checked and verified the optimum temperatures as well as the actual temperatures, the dietitians then set out to hold food temperatures at or slightly above the optimum. The technique was checked and the served food temperatures were tested and retested with results less than satisfactory. In the electric food carts the food reached the service kitchens hot, and was held hot in the containers but it reached the patient's bedside too cool. The various steps were then gone over and the obvious answer was found. The dishes were not hot. Twenty feet more steam radiation was added in a single dish warmer and it was then found that the food was delivered to the bedside at almost exactly the ideal temperature. Twenty feet more radiation is now being added to every dish warmer in this hospital plant.

With proper temperatures this hospital will be able to get better food satisfaction with cheaper foods. As a further step in this direction all milk and water glasses, salad plates and ice cream dishes are stored in the floor ice box. All hot food is now served hot and all cold food is served cold, a service greatly appreciated by patients.

Fasteners Hold Stair Carpet in Place

Few hospitals can afford stair carpets. For those institutions that still have them and for the great group of hospitals that will soon be buying stair carpeting for their nurses' homes, attention is called to a new gadget. The neatest method of fastening stair carpet is to install the new bakelite holder fingers that slip so easily into the holders. Carpets so fastened can be taken up or laid in a few minutes and cannot bulge or creep.

ADAPTED TO HOSPITAL USAGE

The purity and quality of MAZOLA specifically measure up to HOSPITAL REQUIREMENTS

MAZOLA has long enjoyed the distinction of being a perfect oil for salads and cooking. Housewives in many thousands of homes have testified to the purity, quality and economy of Mazola.

Mazola makes delicious salad dressings; tender, golden-brown fried foods; flaky pie crusts; richer, better-grained cakes and biscuits, etc.—*all* readily digestible.

Hospital patients are certain to relish and appreciate foods made with Mazola—as well as being assured of the inherent purity and reliability of this pure vegetable oil from corn.

●

The makers of Mazola Salad and Cooking Oil also produce the following meritorious products:—

KARO SYRUP—*for table use and for Infant Feeding.*
DEXTROSE—*for quick energy value.*
ARGO, KINGSFORD'S or DURYEA'S CORN STARCH—*for baking; also for sauces and gravies.*
KRE-MEL—*for wholesome, delicious desserts.*
LINIT—*for soothing, refreshing baths.*

MAINTENANCE, OPERATION AND EQUIPMENT

Paint Mask Designed to Save Both Time and Money

IT FREQUENTLY happens that mechanical equipment does not operate with the desired maximum efficiency. A new piece of equipment is usually purchased with a definite production schedule in mind, but the buyer usually makes a mental reservation that this schedule can be improved upon if necessary.

The paint spraying equipment purchased recently by the University of Chicago Clinics had been in service approximately six months when it was discovered that the savings in time and material were not as large as had been anticipated.

Paint spraying in a hospital must be done with the least amount of discomfort and inconvenience to the occupants. Consequently, when the painters were working in a closed room the only ventilation possible was by means of a large window fan, which by rights should remove all the paint fog and moisture. While the fan removed a large part of the fog, still it did not do a good enough job. The painters were unable to work for a period of more than forty minutes without developing a dizziness and nausea, which caused them to stop work for about twenty minutes.

Painter's mask, rotary pump and motor mounted on portable base.

In studying the problem, various types of painter's masks were considered, but all were rejected because they worked on the principle of filtering the paint impregnated air.

The method developed at the University of Chicago Clinics is based on the theory that if clean air is to be supplied it must come from outside the room in which the spraying is being done. A motor driven pump is placed in an adjacent room and a hose conducts the clean air to the face masks worn by the painters.

A one-quarter horsepower motor (thermoguard type[1]) and a rotary pump are mounted on a portable base. The pump delivers one and a half cubic feet of air a minute at a pressure of approximately one-half pound per square inch. A guard protects the flexible coupling between the motor and the pump. The intake side of the pump (the pipe connection in the foreground of the picture) is constructed similar to the exhaust of a motorcycle. The horizontal pipe near the base has a small slit at the bottom which serves the double purpose of eliminating noise and preventing dirt particles from being sucked into the pump. The outlet pipe is on the far side of the equipment and supplies air to the hose. There is a U-shaped trap that makes it possible to remove oil and other materials that may accumulate. If desired, a gauze filter may be inserted to remove dirt particles from the air.

The painter's mask, which is shown at the left of the picture, is of the conventional type in which the air is drawn into the mask at the front and is exhaled through a blubber tube at the bottom. This has been changed, however, so that the air is now pumped in at the bottom of the mask and is forced out the front and around the sides. The incoming air is projected against a baffle which distributes it in the mask. The baffle consists of a small piece of sheet copper that is soldered to the connection coming through the mask. Since a greater volume of air is supplied than a man can breathe, a large surplus escapes at the front and around the edges of the mask in addition to the air exhaled by the painters. The surplus escaping air keeps paint away from the painter's eyes and permits an area of clear vision.

The equipment occupies a space measuring 20 by 10 inches. It is mounted on rubber casters and is easily moved about. The single outlet may be replaced by a double outlet so that two painters may use the equipment in the same or in adjacent rooms. Each painter is supplied with a 35-foot length of hose (⅝-inch outside diameter and ¼-inch inside diameter).

The total cost of the equipment was $47.44. It enables the painters to work continuously; formerly 33 per cent of their time was wasted due to illness caused by inhaling paint vapors.

[1] A thermoguard is a device that cuts off the motor before any damage can be done to the motor due to excess heating.

Vitamin Retention in High Degree Through Heinz Methods

Heinz Strained Foods are higher in vitamin content than foods prepared by ordinary home methods.

THE House of Heinz has perfected methods for cooking, straining and packing vegetables, which are designed to reduce vitamin destruction to the practical minimum.

As a result, Heinz Strained Foods are ideal in the diet of infants and patients requiring soft diet.

Fresher-than-market vegetables, grown under strict supervision, are cooked with dry steam in air-tight kettles. They are strained, free from air, and sealed, under vacuum, into enamel-lined tins.

Most home methods for cooking and straining vegetables involve the destruction of vitamins and loss of mineral values to a far higher degree than through Heinz methods. Impartial tests prove this.

Actually, therefore, in nutritive values, Heinz Strained Foods are higher than those of most home-prepared vegetables.

In prescribing Heinz Strained Foods, you can be sure of the uniformly well retained food values.

May we send you a copy of the new reference manual of nutritional charts, showing tabulated information and analyses of many types of foods? This manual, prepared under qualified scientific supervision is yours for the asking. Write to H. J. Heinz Co., Dep't. MH 104, Pittsburgh, Pa.

Heinz Strained Foods include 8 varieties—Mixed Vegetables, Peas, Green Beans, Tomatoes, Carrots, Spinach, Beets and Prunes

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A Group of the 57 Varieties

Dietetics and Institutional Food Service

Conducted by ANNA E. BOLLER, Central Free Dispensary at Rush Medical College, Chicago

Modernization Cuts Dietary Costs and Improves Service

By DOROTHY MILAVETZ

Director, Department of Dietetics, Grace Hospital, New Haven, Conn.

CONTINUAL complaints of unpalatable food, waste and high cost caused a rapid turnover of the dietary personnel in Grace Hospital, New Haven, Conn. The dietary department deteriorated so rapidly that the administration determined to make a complete change in organization.

It was found that the general cause of dissatisfaction could not be remedied by mere changes in dietitians. The installation of considerable new equipment was required before any real improvement and economy could be effected. The kitchens of the hospital shared the fifth floor of the private pavilion with the operating rooms. Delivery of food and distribution of bulk food were made by a freight elevator.

About 500 persons, including patients and personnel, were served daily. The nurses' and employees' dining rooms were in the basement of the ward building. The children's pavilion was a separate building adjoining the farthest side of the ward building. Obviously, nothing could be done to change this arrangement, so any remedy or improvement made had to be looked for in some other direction. Central service was used in the private pavilion, and the food was distributed by two dumb-waiters carrying four trays each. Food carts were used in the ward building.

Poor food, slow service, waste and high cost were the only things wrong with Grace Hospital's dietary department when Miss Milavetz assumed charge. The "nursing" of obsolete equipment had been one of the hospital's luxuries. New equipment and rearrangement of the layout, however, solved the problem without exceeding the budget

Employees Helped Themselves to Supplies

The purchasing and storing of all food supplies were under the direct supervision of the dietary department. The food storeroom shared the kitchen space. Although approximately $5,000 worth of stock was carried in the stockroom, this room was open all day with employees wandering in and out taking what they wanted. No attempt was made to keep any record of food issued or taken. Inventory was taken once a month, although staples were purchased as a shortage became apparent, usually once a week. Vegetables and meat were purchased daily.

Frequent purchasing of perishable supplies was necessitated by lack of storage space and inadequate refrigeration. The refrigerator boxes were small, low-ceilinged and wood-lined. There were three sections, all of which had to be maintained at the same temperature, for there was no way of regulating the temperature for individual boxes. It was necessary to shut off the refrigerating machine each night because it caused such a vibration in the building that it disturbed the patients in that wing. Consequently, the boxes were usually at a high temperature in the morning. During the daytime, vegetables were frozen while meat was being maintained at the proper temperature. The humidity in the boxes was high, and there was considerable rotting and molding in the

● FOR THE HIGH CALORIE DIET. Even finicky patients find a high calorie count easy to take with this salad: drain two Libby Peach Halves; fill with softened cream cheese mixed with chopped dates and maraschino cherries; top with toasted cocoanut. Serve with whipped cream mayonnaise.

● PEACH SURPRISE, a suggestion for the Children's Diet, is pictured at the left. To make it, you fill a Libby Peach Half with mint-flavored Bavarian Cream. Cover with a second peach half, and garnish with fresh mint.

● FOR THE LOW FAT OR LOW RESIDUE DIET. Fill a sherbet glass half full of boiled custard, flavored with almond. Top with two of Libby's golden, delicious California Peach Halves. A simple dessert the staff will like, too.

"MATCHED HALVES" *ARE* NICER!

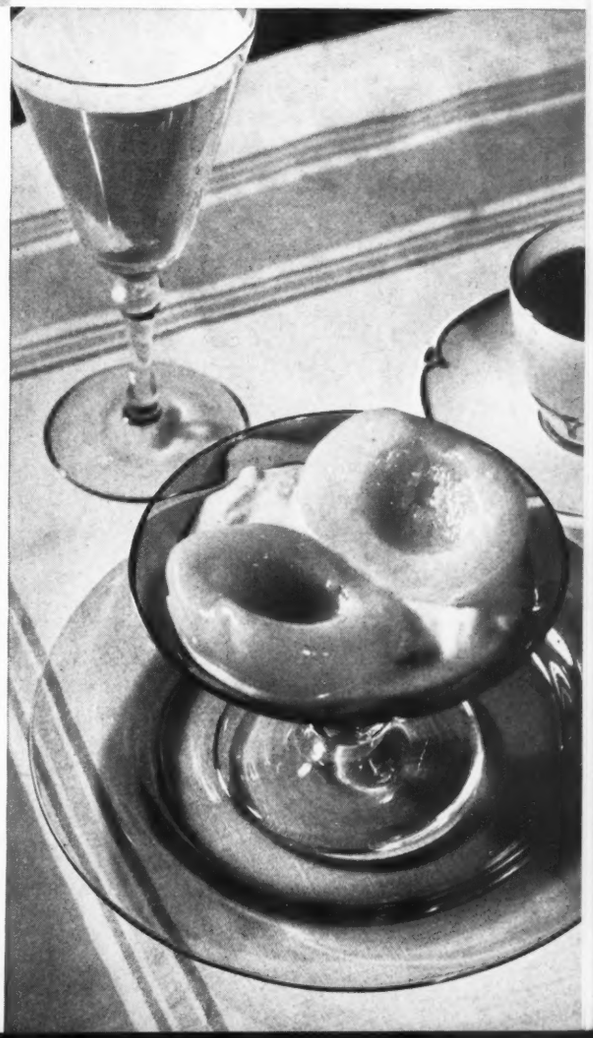
AND THEY COST YOU NO MORE

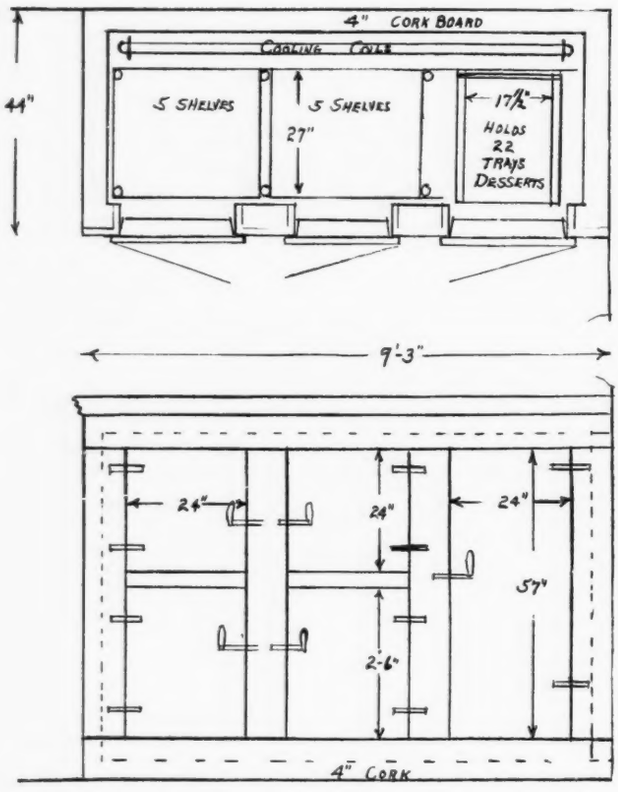
Nowhere do niceties of food and service count for more than in a hospital. None-too-eager appetites need all the stimulus that attractive trays and carefully selected foods can provide. And what dietitian wouldn't prefer the choicer foods . . . if she were sure they wouldn't unbalance her budget.

Libby's California Peaches are well-known for their *superbly matched halves*. In every can, the halves are wonderfully matched for size, shape, color, flavor, texture. Naturally, they are more attractive and more delicious . . . *nicer*. Yet these finer peaches of Libby's cost you no more than ordinary brands!

No wonder then that the dietitians of so many great hospitals choose Libby's California Peaches. You will too, once you try them. You can get them from your usual source of supply. Libby, McNeill & Libby, Dept. N-47, Welfare Building, Chicago.

Libby's 100 Fine Foods include Fruits and Fruit Juices, Vegetables, Pickles, Condiments, Canned Meats, Evaporated Milk, and Alaska Salmon. They are packed in regular and special sizes for institutions





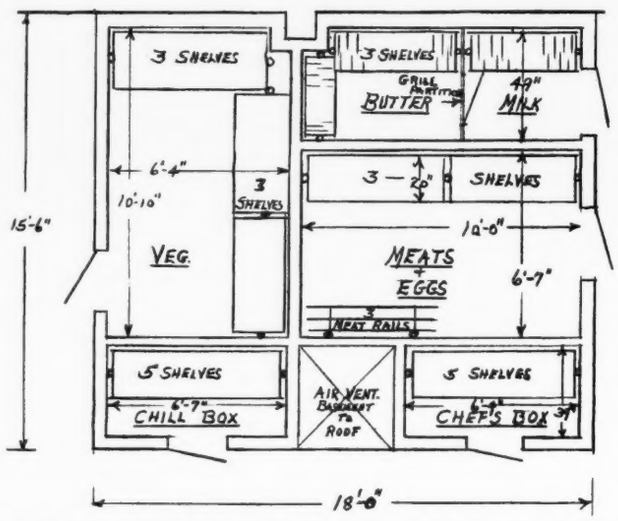
This drawing shows the construction details of the new pastry and dessert cooler installed in the dietary department.

wood because of it. Due to the haphazard control of the temperature in these boxes and their poor condition, food had to be purchased in extravagantly small quantities. Leftover foods, whether raw or cooked, could be used only occasionally.

The cooking unit consisted of four ranges, a broiler, a baker's cabinet oven and one three-section vegetable steamer. The lining of the oven had been burned out, the doors were sprung and there was no thermostatic control of any kind. There was a terrific waste of gas and baking was subjected to unpredictable variations in temperature. A badly rusted vegetable steamer with poor insulation resulted in the rapid discoloration of vegetables and the hiss of constantly escaping steam. The service unit for food in the private pavilion had been set up in such a way that the steam table was across the kitchen from the dumb-waiters, the unrefrigerated salad and dessert section being next to them. With the exception of the main dish, food was sent to the private patients completely uncovered. The dumb-waiters were unreliable. A meal hour seldom passed without their being out of order. Consequently, it was impossible to plan accurate service hours, and the food often had to stand. The patients' complaints of cold, unpalatable food were entirely justified.

Inasmuch as hospitals have felt the depression so keenly, there was not much money available for making changes. Money spent was to be obtained from gifts made directly to the department or taken from actual savings in the food budget. The first big change was the installation of an accurate stock system. The storerooms were kept locked at all times. A perpetual inventory was installed and maintained in a rebuilt cabinet containing six trays with space for 350 items, which was purchased for $50. Supplies, excepting in an emergency, were issued daily at 8 a.m. and 4 p.m., and only upon written orders. Daily posting of this stock record took about ten minutes. This record also showed to whom the supplies were issued, and drew immediate attention to any out-of-the-ordinary demands for certain items of food. From the purchasing angle it indicated the quantity of supplies immediately. It also showed the average monthly consumption, the price last paid, and from whom the foodstuffs were purchased.

Since perishable foods represented such a large percentage of the food cost, and as there was so much waste both in the hospital's method of purchasing and its utilization of purchased food, the next big undertaking was the installation of cork and cement refrigerators with a new refrigerating system. The cost of these boxes was $2,764. The cost of refrigerating with brine circulation was $1,700, making a total cost of $4,464. A battery of refrigerators was constructed in a space measuring 15 feet, 6 inches by 18 feet by 10 feet, consisting of a vegetable room, a chill room, a butter and milk room, a meat room, a chef's box to be used for cooked and leftover food, and a baker's box containing a salad section equipped with a rack allowing the use of movable trays. The movable trays in this section permitted the refrigeration of salads and desserts until the very last minute before serving. The refrigeration coils were ar-



One of the major changes in the department was the installation of a new refrigerating system and battery of boxes.

THIS CREAM CHEESE SALAD LOOKS SO FRESH AND GOOD I'M ACTUALLY HUNGRY!
IT'LL TASTE JUST AS FRESH AS IT LOOKS, BECAUSE IT'S MADE WITH "PHILADELPHIA" BRAND. GOOD FOR YOU, TOO!

● Cream cheese, like milk, *must* be fresh. Kraft—world's largest maker and importer of fine cheeses—*guarantees* the freshness of "Philadelphia" Brand.

Kraft is able to do this because no city market is more than twenty-four hours distant from a plant which ships new-made "Philadelphia" daily.

As a further safeguard for freshness, Kraft wraps this delicate, creamy-white cheese in three-ounce silver foil packages which eliminate waste from cutting and spoilage—unavoidable risks when cream cheese is sliced from a loaf.

Made with rich cream and whole milk, "Philadelphia" Brand is highly nutritious. And its purity is completely safeguarded. It is wrapped, untouched by human hands!

This most famous of all cream cheeses is but one example of the *many* high quality Kraft products which have distinct advantages for hospital use.

The World's Finest Cheeses are made or imported by **KRAFT**

FREE . . monthly service of cheese recipes for hospitals

It *pays* to use quality cheese. More and more dietitians are discovering that scientifically produced cheese products are vastly superior in flavor . . . surprisingly economical to use for quantity cooking.

Kraft offers you many fine cheeses which can bring appetizing variety to both staff menus and patients' trays. Kraft-Phenix Cuisine Service will send you, *free*, a valuable monthly service of tested cheese recipes. Fill in this coupon!

Kraft-Phenix Cuisine Service, 401-d Rush St., Chicago

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ranged so that different temperatures could be maintained in the individual boxes. Purchasing of perishables was reduced to two or three orders a week, which permitted comparative shopping for prices. Leftover food was satisfactorily utilized.

The steam table was moved next to the dumb-waiters, changing places with the salad and dessert table. This involved no expenditure, as the labor was done by the maintenance staff of the hospital. It was necessary to install new controllers with a noninterference relay system in the dumb-waiters. This exceedingly inconspicuous improvement cost $852. Approximately $500 was spent in the purchase of new covered dishes for the private pavilion. The food service was planned and spaced so that no more than two minutes elapsed between the time the trays left the kitchen and the time the patients received them. Complaints about cold food were practically eliminated.

The four ranges were replaced by two ranges connected by a spreader plate for simmering and a double roasting oven. An analysis of the hospital's cooking requirements revealed that four ranges were necessary only because of oven space. A cabinet oven and a broiler were also installed.

Arrangements were made whereby the hospital would continue to pay the gas company the average sum of the previous monthly bills, the difference between the present actual consumption and the previous bills to be applied to the cost of the new stoves. The time allowed for this payment was two years. The amount of saving applied toward the cost of the new stoves was approximately $65 a month. The cost of the ranges, the double oven, the broiler and the baker's oven was $1,174. The hospital was enabled to secure a modern vegetable steamer which provided fresh steam for cooking for $375 by taking one which had been used for demonstration purposes at a hotel show.

Departmental gifts amounted to approximately $2,500. The reduction in the cost of the food served was relatively greater than the corresponding drop in the price index of raw materials. Despite the cost of new equipment, the dietary budget, reduced to conform with the general reduction in all departmental budgets, was at no time exceeded. Waste was reduced to a minimum, and the general satisfaction increased. The nursing of obsolete equipment and poor organization during the depression had been among the hospital's luxuries.

Pewter Dishes Have Disadvantages

Pewter dishes have sometimes been recommended because they cost less than silver and will not break. There are several objections to pewter, however, which make it undesirable for use in hospital kitchens.

In the first place it is porous and consequently cannot be kept as clean as silver or china dishes. It absorbs odors and grease and this affects the taste of foods served. Furthermore it is dark in color and does not give the light, cheery effect on a tray that is desirable. Because pewter is soft it can be easily bent out of shape and therefore cannot be counted on to last as long as silver. In the case of ornaments, such as vases and candlesticks, these objections are unimportant.

Valuable Book on Physiology Is Brought Up to Date*

"A Text-Book of Physiology," already highly esteemed by persons who have taken college courses in science within the past twenty-five years, calls for no detailed discussion of its merits. Through numerous reprintings it has been kept as nearly up to date as is possible in a subject that is so continuously growing and changing. The author states that in this twelfth edition "more alterations than usual have been called for, particularly in such subjects as the vitamins, the hormones and the chemistry of muscle contraction."

These subjects are of special concern to dietitians and other hospital workers. Also of immediate interest to this group are Sections 7 and 8 comprising thirteen chapters and covering nearly three hundred pages. Section 7, Physiology of Digestion and Secretion, treats in detail the movements of the alimentary canal from mastication to defecation, the digestive action of the enzymes and salivary glands, digestion and absorption in the stomach and the intestines, the liver and its secretions, the skin and kidneys as excretory organs and secretions of the ductless glands—internal secretions.

Section 8, Nutrition and Heat Production and Regulation, is concerned with the essential food elements, their nutritive history, value and metabolism; heat energy of foods; production of heat in the body and other features of dietetics and metabolism. This volume offers a comprehensive text for teaching student dietitians and nurses as well as interns and is a valuable reference for any library. —*L. G. G.*

*A Text-Book of Physiology, by William H. Howell, M.D., emeritus professor of physiology, Johns Hopkins University, twelfth edition, W. B. Saunders Co., Philadelphia, 1933, $7.

What Shall I Eat?*

A small volume entitled "What Shall I Eat?" encompasses a wide field of facts and foibles and presents a dietary regime that appeals to common sense and is easily understood by the nonprofessional. Charts, menus, tables and suggestions are given in a condensed yet readable form. The author is well known through her writings for magazines and newspapers. The illustrations are by Helen E. Hokinson and they are in her best *New Yorker* vein.—*L. G. G.*

*By Edith M. Barber, The Macmillan Company, New York City, 1933, $1.75.

A note on giving patients the fruit they like

Well-known hospitals report pineapple's strong appeal

Of the many foods patients like and will eat frequently, Canned Pineapple is outstanding. This we know from evidence supplied by the dietitians of many leading hospitals.

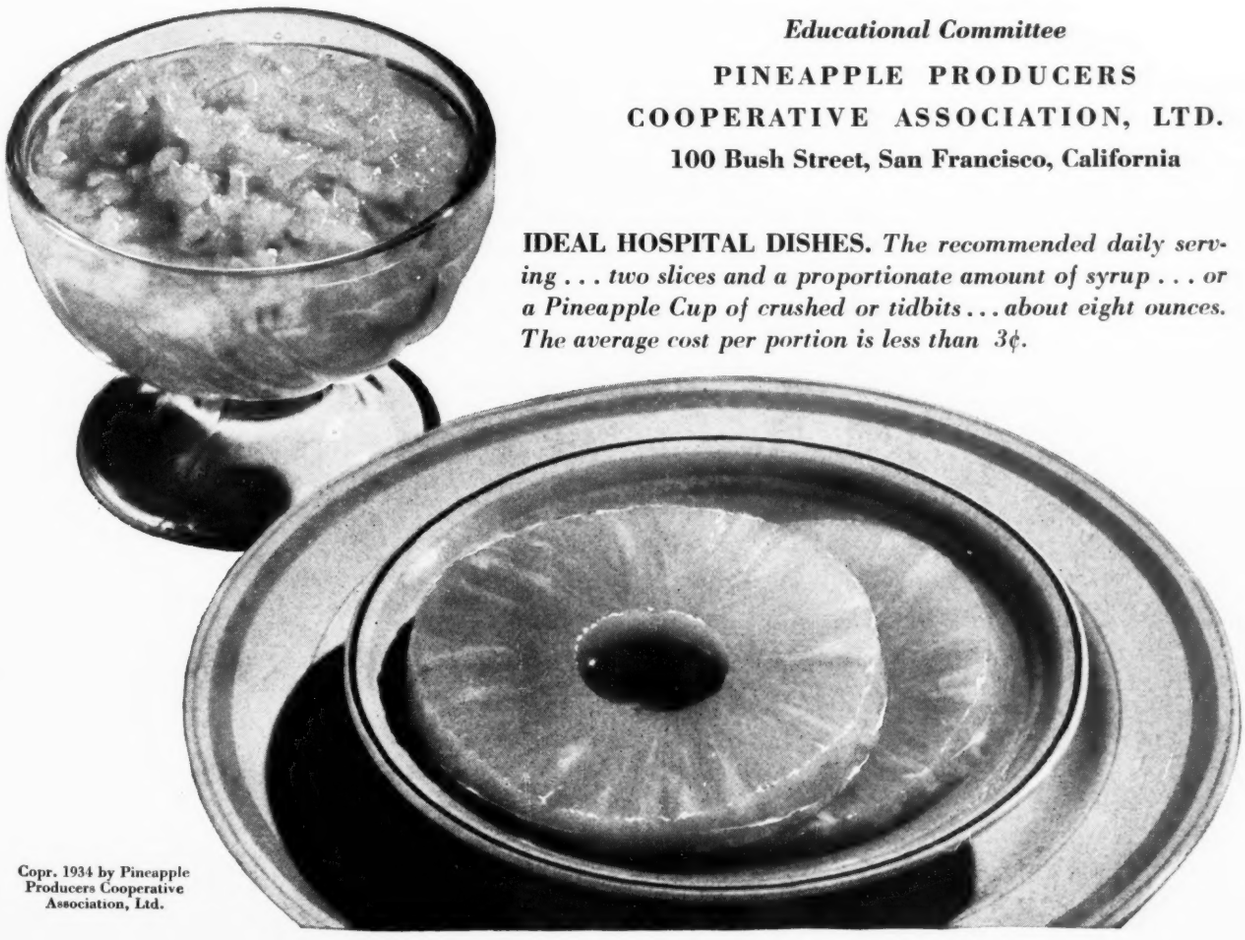
One said that pineapple in some form is appearing on her trays virtually every other day . . . that 90% of the patients eat the entire portion. And her experience is typical of what many other prominent dietitians are finding.

Why this trend to the more frequent use of Canned Pineapple? It is a perennial favorite—because of its zestful goodness. It is inexpensive. And the fruit is shown by dietetic research to be a useful supplementary source of important nutritional values.

Pineapple supplies good potencies of the A, B and C vitamins. It contains valuable amounts of iron and copper. A single eight ounce serving raises the alkaline reserve of the blood stream for at least two hours after eating. It is outstanding in energy content.

Consider these as well as Canned Pineapple's additional dietetic assets—always uniform—and you will see why this fruit is recommended for *daily* use.

The suggested serving is a Pineapple Cup or a portion of two slices. But pineapple is also adaptable to numerous other dishes that patients enjoy—appetizers, salads, meat courses, desserts—for both general and special diets.



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IDEAL HOSPITAL DISHES. *The recommended daily serving . . . two slices and a proportionate amount of syrup . . . or a Pineapple Cup of crushed or tidbits . . . about eight ounces. The average cost per portion is less than 3¢.*

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The Small Hospital Dietitian— A Specialist in Many Lines

By LOUISE CLARK
Dietitian, Dallas Methodist Hospital, Dallas, Tex.

THE dietitian in a small hospital is in a position to acquire an invaluable education in specialized knowledge.

She has entire responsibility for the administration of her department, including general management, employment and supervision of personnel, purchasing of food and facilities for its preparation, planning of menus and therapeutic diets and teaching of student nurses.

The large number of problems to be dealt with by the dietitian in a small hospital usually more than offsets the smaller number of problems of greater magnitude in the larger institution. Just as much time, if not more, is required to handle satisfactorily the details in the smaller institution.

In an effort to hold cost to a minimum, the food purchasing for Dallas Methodist Hospital is done on a competitive basis. This would materially increase the time required for purchasing were it not for the fact that all solicitors from the several companies with which the hospital does business are received by appointment on specified days of the week. At such times all staples and canned goods are ordered for the coming week. The purchasing of food supplies has been further simplified by use of a perpetual inventory. This would hardly be possible if it were not for the fact that the hospital has arranged with practically all sources of supply for deliveries to be made only once a week. In this way entries for incoming supplies are reduced to a minimum.

Meats Are Purchased in Retail Quantities

The simple form used for keeping inventory of canned goods and staples, a portion of which is shown in the accompanying illustration, is supplemented by daily lists from the chef of items used from the storeroom. The chef's lists are totaled once a week and subtracted from stock on hand as shown on the inventory sheet. The weekly order is then taken from this. A check of the inventory sheet with the storeroom is made on the first of each month.

When it comes to the purchase of fresh meats, it has been found feasible to adopt a different policy from that pursued in connection with the purchase of canned goods and staples. Limited ice box and storage space, coupled with comparatively small daily consumption, makes it advisable to purchase meats in retail quantities. It is more economical in the long run to use retail cuts of meat purchased from one reliable firm that can be depended upon to deliver the desired quality of meat at all times. Fresh fruits and vegetables are often bought to advantage from hucksters and if time permits a daily trip is made to local markets.

In some instances the dietitian is called upon to accept certain food items from patients in payment for hospital bills. It is always advisable to do this when such foods are of satisfactory quality and can be obtained at market prices.

The dietitian in a small hospital should keep a food cost record, with details down to an average

	Feb. 5	Feb. 12	Feb. 19	Feb. 26	March 5	March 12
Apples	4 gal					
Apricots	5 gal					
Asparagus	1 cs					
Beans						
String	1 cs					
Lima	15 #					
Pinto	25 #					
Kidney	3 gal					
Blackberries	1 gal					
Cereal						
Oatmeal	1 cs					
Wheat	1 cs					
Cherries						
Maraschino	½ gal					
R. Anne	1 gal					
Red pitted	2 gal					
Black	0					
Cornmeal	40 #					
Cocoa	8 #					
Coconut	2 #					
Cornstarch	22					
Figs, preserved	½ doz					
Flour						
White	1⅓ sk					
Whole wheat	0					

This is a portion of the simple form used for keeping inventory of canned goods and staples. The system is described in the text.

★ I feel confident that Marvin-Neitzel knows how to make good uniforms and has the equipment with which to do it, but how do I know that you will always have material of our particular pattern to use? We find it difficult even to secure it for the uniforms which we make in our hospital stitching room and we can't be changing materials every now and then.

Directress of Nurses

Certainly...

We'll Answer that Question

(which is a problem)

but **MARVIN • NEITZEL** *has this advantage.*

- WE ARE IN TOUCH with practically all of the known sources of supply for uniform cloth.
- HUNDREDS OF THOUSANDS OF YARDS OF MATERIAL in more than two hundred patterns are carried in stock.
- TWICE A YEAR WE SEND OUT QUESTIONNAIRES to our training school accounts to learn their requirements for the next six months.
- PURCHASES ARE PLANNED FAR IN ADVANCE of needs.
- IF A PATTERN IS DISCONTINUED, we can usually secure an exact duplicate from another of our mill contacts.
- THERE IS NO SURER WAY TO MAKE CERTAIN that you will continue to secure your material than to have Marvin-Neitzel outfit your students.

LET US MAKE UP A SAMPLE OUTFIT for your training school so that you can compare Marvin-Neitzel quality with the outfit you are now using.

MAIL COUPON NOW

MARVIN • NEITZEL CORPORATION

Send student outfit for free inspection and test

Directress of Nurses.....

Hospital.....

Address.....

M4H4

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TROY, N. Y., and 192 Lexington Avenue, New York City

cost per plate. This should include the total cost of prepared food per plate unless this requires too much time, and then it is advisable to keep a record of raw food cost. This can be used as a basis for checking any increase in cost.

Menu planning and tray service in a small hospital offer many possibilities for making the patient's hospital stay a pleasant one. Aside from careful selection and scientific preparation of foods, the serving of attractive trays is of the most importance. The dietary department's contribution to the restoration of the patient's health is proper feeding under doctor's directions, and an attractive tray of tasty food goes a long way toward restoring a lost or weakened appetite. Occasionally special decorations are provided for the trays. A selective menu is not offered but the dietitian sees every patient soon after admission to the hospital and if a desire for special food is expressed, an attempt is made to satisfy that desire as soon as possible.

The dietitian contacts the patient often because friendly personal interest helps to offset complaints as well as to increase the patient's appreciation of the institution. Personal contact is also a help to the dietitian because it gives her an opportunity to find out how well she is pleasing the patients and it inspires her to use all possible ingenuity in the discharge of her responsibilities.

Central Tray Service Has Many Advantages

Central tray service is the most satisfactory method of serving in a small hospital. The principal reason is that it positively assures the patient a tray checked by the dietitian. Service from floor kitchens under the supervision of student nurses or even floor supervisors permits too many mistakes that reflect upon the dietary department. Central tray service also keeps food odors off all floors except that occupied by the dietary department and eliminates the ill effects of such odors upon patients. Freedom of the building from food odors is an invaluable asset. The dietitian can prevent much food waste by standardizing serving portions. Since no food is kept on the floors, it is possible with central service to effect big savings by keeping a close check on nourishments ordered by floors. The dietitian checks return trays to determine the foods generally liked by patients. This is a great help in planning menus.

One of the greatest advantages of central service is that it permits the serving of food to the patient direct from the grill instead of from the grill to a heated conveyor and then to the patient. The plate is freshly served when it reaches the patient and is more attractive than if the food had stood for several minutes in a heated conveyor.

In a small hospital it is impossible to have separate departments for the preparation of special diets. Consequently the dietitian must provide special diets from simple variations of the general menu. Instead of preparing special foods with no regard for the general menu, the dietitian directing the preparation of both special diets and the general menu is in a position to select foods to be used for special diets at the proper time during the preparation of the general menu.

No Maid Service in Dining Room

Special emphasis has been placed on lowered operating cost in the last few months. The personnel has been cut when possible. Only one girl is required to take care of the cleaning and serving in the dining room where the staff, doctors and student nurses are fed, but during heavy serving hours she is given help to expedite service. Each person carries his tray to the table, eats directly off the tray and returns it to the serving station, leaving the place clear for another. This eliminates the need of maid service in the dining room during serving hours. A careful study of foods has enabled the dietitian to serve less expensive but equally nourishing food, which has resulted in a considerable saving.

The turnover of help is usually more of a problem in a small hospital than in a larger institution. The community will determine to some extent the type of help used. Regardless of race, any employee who is made to feel that he fills his place in the routine as well or better than any other person will give his best to the fulfillment of his duties. His pride in the work will stimulate interest in the department as a whole. In a small department where all of the work is done in one kitchen and each person's work is closely related to some other position, the best cooperation between all employees must be maintained.

The Dietitian's Responsibilities

Dr. Paul Keller, superintendent, Beth Israel Hospital, Newark, N. J., commented as follows regarding the dietitian's responsibilities in addressing a recent meeting of the New Jersey State Dietetic Association:

"The dietitian is confronted with numerous responsibilities, if she is to fulfill her real mission in the hospital. It has been said, 'The dietitian must be a person who can cook; a scientist, an economist, a psychologist, a teacher, an executive, a hotel steward, and above all, a diplomat.' She may not be able to be all these at once, but she must be each of them at some period in her career. Adequate dietary staffs must be maintained to carry out these duties. The patient is the foremost consideration in hospitals, and administrative duties must not be allowed to interfere with the care of the sick."

Ideal hospital food conveyor systems of today are far in advance of the best food conveyors of a few years ago. Ideals have been improved to meet changing times—to take advantage of new materials, better design, improved engineering.

Ideals now have Alumilite finish wells and utensils, non-porous, smooth, easy to clean, wear resisting.

Ideals are equipped with Westinghouse control—never over heat—always remain at just the right temperature to preserve the flavor, the appearance, the freshness of the food.

Ideals have completely disappearing doors, balloon (pneumatic) tires (optional) rigid frame construction.

Ideals deliver food hot and appetizing to the patient's bed regardless of the distance from the kitchen. Ideals cut service costs and service complaints.

Replace old, inadequate equipment with new *Ideal* EQUIPMENT

Most hospitals use food conveyors most food conveyors are *Ideals*

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Food Conveyors, Trucks, Inhalators, Wheeled Stretchers, Rubber Bumpers

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Toledo, Ohio

REPRESENTATIVES IN PRINCIPAL CITIES

April Dinner Menus for the General Hospital Patient*

By HELEN B. ANDERSON
Scripps Metabolic Clinic, La Jolla, Calif.

Day	Appetizer or Soup	Meat	Potato or Substitute	Vegetable	Salad or Relish	Dessert
1.	Tomato Consommé	Roast Chicken	Mashed Potatoes	New Peas	Celery and Olives	Fruit Ice Cream, Angel Cake
2.	Vegetable Soup	Pot Roast	Browned Potatoes	Spinach	Lettuce, French Dressing	Brown Betty, Cream
3.	Gingerale Fruit Cocktail	Roast Leg of Lamb	Parsley Potatoes	Carrots	Mint Jelly Salad	Sponge Cake
4.	Cream of Spinach Soup	Veal Birds	Baked Potatoes	String Beans	Lettuce, French Dressing	Orange Ice
5.	Celery Soup	Boiled Tongue	Escalloped Potatoes	Brussels Sprouts	Tomato, French Dressing	Fruit Gelatin, Whipped Cream
6.	Consommé	Broiled Sword Fish	Steamed Potatoes	Harvard Beets	3% Vegetable	Lemon Soufflé
7.	Vegetable Soup	Meat Loaf, Tomato Sauce	Riced Potatoes	Baked Squash	Hearts of Lettuce	Soft Custard, Lady Fingers
8.	Pineapple Cocktail	Baked Ham in Cider	Sweet Potatoes With Raisins	Peas	Celery and Olives	Vanilla Ice Cream, Burnt Sugar Cake
9.	Cream of Tomato Soup	Liver and Bacon	Mashed Potatoes	Baked Onions	Grated Vegetable	Cherry Cobbler
10.	Orange and Gingerale Cocktail	Roast Beef	Rice Bread	Broiled Tomatoes	Lettuce, French Dressing	Prune Whip
11.	Cream of Split Pea Soup	Roast Duck	Sweet Potatoes	Summer Squash	Chicory Salad	Grape Ice
12.	Consommé	Roast Leg of Lamb	Mashed Potatoes	Swiss Chard	Jellied Cucumber With Mint	Peach Pie
13.	Grapefruit Cocktail	Halibut, Tartar Sauce	Steamed Potatoes	Spinach	Carrots, Apple and Pineapple	Queen's Pudding, Lemon Sauce
14.	Tomato Consommé	Swiss Steak	Mashed Potatoes	String Beans	Lettuce, French Dressing	Apple Tapioca
15.	Mixed Fruit Cocktail	Roast Chicken and Dressing	Riced Potatoes	Broccoli	Celery and Olives	Loganberry Ice Cream, White Cake
16.	Chicken Broth	Veal Cutlets	Escalloped Potatoes	Carrots	Watercress and Hard Boiled Egg	Apricot Whip
17.	Consommé	Meat Loaf, Spanish Sauce	Spaghetti	Spinach	Romaine, French Dressing	Orange Cake
18.	Cream of Fresh Asparagus Soup	Steak	Baked Potatoes	Eggplant	Lettuce, Thousand Island Dressing	Strawberry Ice Cream
19.	Grapefruit and Avocado Cocktail	Lamb Tongues in Casserole	Rice	Broiled Tomatoes	Lettuce, French Dressing	Coffee Bavarian
20.	Cream of Tomato Soup	Baked Salmon, Sauce	Mashed Potatoes	Celery	Endive, French Dressing	Lemon Pie
21.	Chilled Grape Juice	Liver and Bacon	Baked Potatoes	Asparagus	Coleslaw	Pineapple Delicious
22.	Vegetable Soup	Roast Beef	Rice Bread	Harvard Beets	Lettuce, French Dressing	Ginger Ice Cream, Cake
23.	Consommé	Broiled Lamb Chop	Au Gratin Potatoes	Swiss Chard	Perfection Salad With Mint	Chocolate Blancmange
24.	Clam Chowder	Roast Veal	Browned Potatoes	Brussels Sprouts	Avocado and Grape Fruit	Orange Cream Pie
25.	Celery Bisque	Baked Ham, Pineapple Sauce	Steamed Potatoes	String Beans	3% Vegetable	Baked Pear
26.	Consommé	Swiss Steak, Tomato Sauce	Macaroni	Broccoli and Lemon	Tropical Salad	Charlotte Russe
27.	Orange and Grapefruit Cocktail	Broiled Sweet Breads	Rice	Baked Squash	Lettuce, Thousand Island Dressing	Chocolate Pie
28.	Tomato Consommé	Lamb Chops	Baked Stuffed Potato	Asparagus	Lettuce, French Dressing	Apricot Bavarian
29.	Cream of Corn Soup	Veal Birds	Mashed Potatoes	Zucchini	Orange and Grape Fruit	Strawberry Short Cake
30.	Gingerale and Mixed Fruit Cocktail	Pot Roast	Browned Potatoes	Cauliflower Au Gratin	Tomato	Deep Apple Pie

*Requests for recipes for any of the above dishes should be addressed to Anna E. Boller, Central Free Dispensary, Rush Medical College, Chicago.

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"SLIGHT intestinal paresis? See that she gets a hypodermic of pituitary, Miss Gray — Armour's."

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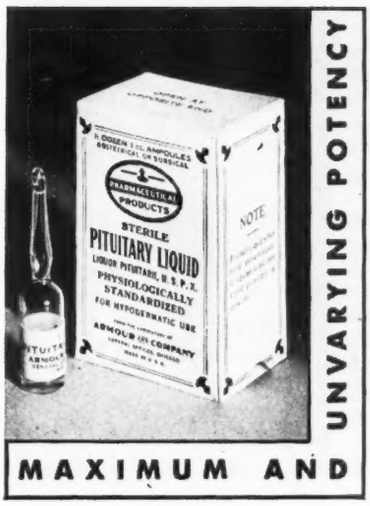
When prescribing Surgical Ligatures, Suprarenalin Solution, Concentrated Liver Extract, Concentrated Liver Extract with Iron, always specify ARMOUR'S.



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HEADQUARTERS FOR MEDICAL SUPPLIES OF ANIMAL ORIGIN

NEWS OF THE MONTH

Three National Nursing Organizations Will Hold Biennial Convention This Month

"The Changing Order and the Profession of Nursing" will be the keynote for the biennial convention of the three national nursing organizations, to be held at Washington, D. C., April 22 to 27. The American Nurses' Association, the National League of Nursing Education and the National Organization for Public Health Nursing are the three organizations that will participate in the convention.

There will be six joint sessions and the presidents of the three national organizations will each preside at two of these sessions. The joint session programs will present the recognition of the effect which the great social and economic world changes have made and will make on nursing.

The presidents of the three organizations are: Elnora Thomson, American Nurses' Association; Effie J. Taylor, National League of Nursing Education, and Sophie C. Nelson, National Organization for Public Health Nursing.

The first joint session will be held on Monday evening at eight o'clock. Two joint sessions will be held on Tuesday, the first in the morning when Mrs. Franklin D. Roosevelt is expected to speak, and the other in the evening. One session will be held on Wednesday morning, and the remaining joint sessions will be held on Thursday morning and on Thursday evening.

The programs of each of the three national organizations will deal more specifically with "The Changing Order" as it relates to the particular group and to the individual nurse.

The American Nurses' Association is devoting a general session to "Nursing the Patient," and the patient will be represented in this program as well as the physician, the nurse and the hospital executive. Another general session will have as the topic of discussion, "How Can We Measure the Quality of Nursing?" "The Economic Welfare of Hospitals as Affected by the Nursing Personnel" will be discussed in a general session.

The A. N. A. section programs will provide opportunity for papers and discussions of particular interest to the section members.

The National League of Nursing Education has included in its program discussion of "State Board Relationships," "The New Emphasis on Social Science in the Nursing School Curriculum," and "Nursing Education and the Negro Nurse." Alden B. Mills, managing editor, The MODERN HOSPITAL, will speak on "The Need of Subsidiary Workers in Nursing Services as Seen by the Committee on the Costs of Medical Care."

The American Nurses' Association will hold a business session on Monday afternoon, April 23, with President Thomson presiding. The National League of Nursing Education will hold its business session on Monday morning, with President Taylor presiding.

Tuesday morning will be given over to a discussion of "Legislation and Hospitals." Dr. C. H. Sprague, Broadlawns, Polk County Public Hospital, Des Moines, will lead the round table discussion.

"Problems of Administration and Economics" will be discussed on Tuesday afternoon by Robert Nettleton, superintendent, Iowa Methodist Hospital, Des Moines.

Iowa Prepares for Annual Meeting

Plans have been completed for the annual meeting of the Iowa Hospital Association, which will be held at Council Bluffs, April 30 to May 1.

The Iowa League of Nursing Education, the Iowa State Dietetic Association and the Iowa State Record Librarians Association will meet jointly with the hospital association. A large representation of hospital executives from Nebraska is expected to attend the Iowa meeting.

Monday morning's session, April 30, will be devoted to the general subject of "Education of the Public." Dr. Malcolm T. MacEachern, Chicago, will outline the program of the council on community relations of the A. H. A. Janet Geister, Newark, N. J., will speak on "The Nurses' Contribution to Hospital Public Education."

The afternoon session will center around "The Hospital and Its Adjustment to Changing Conditions." The speakers will include Dr. Bert Caldwell, American Hospital Association, Chicago; Robert E. Neff, University Hospitals, Iowa City; Rev. Harry Hess, Nebraska Methodist Episcopal Hospital, Omaha, and F. P. G. Lattner, Finley Hospital, Dubuque.

Hospital in New Quarters

The National Hospital for Speech Disorders, New York City, has moved into new quarters at 126 East Thirtieth Street. The scope of the hospital's work, which has heretofore been confined mainly to pathologic conditions affecting speech, will be broadened to include training in speech for normal persons, it is announced.

In its sixteen years of existence the hospital has treated more than 30,000 persons. Doctor James Sonnett Greene is medical director.

Hospital Conference Is Formed in San Francisco

A new council has recently been formed in San Francisco, known as the San Francisco Hospital Conference. It is not intended that the new organization shall conflict in any way with the hospital council of the community chest. The latter organization will continue to function in an advisory capacity in the interests of hospitals supported by public and private funds in all matters concerning the hospitals and the community chest.

The hospital conference is in the nature of a business organization, its purpose being to help its members to act collectively on matters of mutual interest, especially those that concern business interests. Matters of other than local interest will be handled through the Western Hospital Association, with which the Hospital Conference is affiliated.

Dr. R. B. Seem, director of Stanford University Hospitals, San Francisco, is president of the organization, and Thomas F. Clark is secretary. Headquarters are maintained with the San Francisco Chamber of Commerce, 451 California Street.

*

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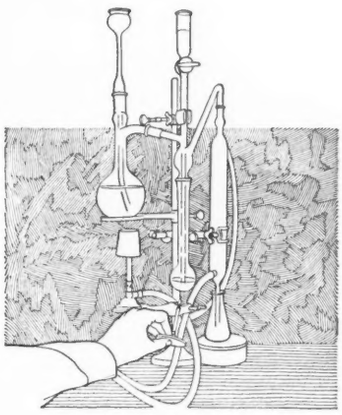

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ADDRESS ELI LILLY AND COMPANY, INDIANAPOLIS, INDIANA, U. S. A.

NEWS OF THE MONTH

Pennsylvania Convention Will Be Held April 10-12

The annual meeting of the Hospital Association of Pennsylvania will be called to order on Tuesday afternoon, April 10, by Jessie J. Turnbull of Pittsburgh, president of the association. The meeting will be held at Pittsburgh and will last for three days.

On Wednesday morning Maj. Roger A. Greene, Pottsville, will speak on "Legislation as It Affects Hospitals." "Publicity and Public Relations" is the subject of an address to be delivered by M. H. Eichenlaub, Pittsburgh. Southard Hay, director of the department of welfare, Pittsburgh, will speak on "The Hospital and the City." Dr. Donald C. Smelzer, Philadelphia, and Lewis N. Clark, Germantown, will lead the discussion at this session.

The Wednesday afternoon session will open with the reports of the treasurer and the nominating committee. A round table will follow on "Hospital Problems," conducted by Melvin L. Sutley, Drexil Hill. The round table subjects will include: accounting and collection methods; eight-hour day for nurses; out-patient department; stock records and stock control; petty theft; cost studies and occupancy studies; publicity and fracture service.

Doctor Caldwell on the Program

The election of officers will follow the round table, after which another round table on "Hospital Problems" will be conducted by John M. Smith, Philadelphia.

The association dinner will be held on Wednesday evening, with President Turnbull presiding. The speaker will be Albert Kennedy Roswell.

Sister Mary Rose will preside at the Thursday morning session. The executive secretary, H. E. Bishop of Sayre, the auditing committee and the membership committee will render their reports.

"The Communitywide Survey of Philanthropic Agencies Public and Private" is the subject of an address to be delivered by R. Templeton Smith. Clifford K. Wright, attorney, will speak on "Solicitation of Negligence Cases in Hospitals," and Dr. Bert W. Caldwell, executive secretary, American Hospital Association, will describe that body's activities in Washington, D. C. Homer Wickenden, general director, United Hospital Fund of New York, will speak on "The Organization of Hospitals for Community Action."

Michael M. Davis, director for medical services, Julius Rosenwald Fund, Chicago, will address the closing session on Thursday afternoon. The subject of his paper will be "Hospitals and Clinics in the Recovery Program."

Ontario Convention to Be Held in Toronto

The board of directors of the Ontario Hospital Association met recently and voted to hold the association's 1934 convention at Toronto, October 10, 11 and 12. Headquarters for the convention will be at the Royal York Hotel.

West Virginia, Kentucky and Ohio Associations Complete Plans for Joint Convention

The complete program has been announced for the tri-state convention of the West Virginia, Kentucky and Ohio hospital associations, which will be held in Cincinnati, April 17 to 19. Headquarters will be at the Netherland Plaza Hotel.

Record librarians and nurse anesthetists from West Virginia, Kentucky and Ohio will also hold their conventions at the same time in the same hotel, as will the Ohio Dietetic Association.

The three state hospital associations will hold separate meetings at the opening session on Tuesday morning, April 17. The presiding officers at these sessions will be Dr. T. K. Oates, Martinsburg, president of the West Virginia association; Dr. E. J. Murray, Lexington, executive secretary of the Kentucky association, and B. W. Stewart, Youngstown, president of the Ohio association. Business matters, committee reports and reports of officers will be considered at these sessions.

The three hospital associations will hold a joint meeting on Tuesday afternoon, with B. W. Stewart presiding. National hospital affairs will be discussed, and Dr. N. W. Faxon, Rochester, N. Y., president of the American Hospital Association, will describe the activities of that body.

The convention banquet will be held Tuesday evening. In addition to the members of the three state hospital associations, the dietitians, the record librarians and the nurse anesthetists will also attend the banquet. Rev. M. F. Griffin, Cleveland, will serve as toastmaster.

The Wednesday morning program calls for separate meetings for the state hospital associations. The hospital code will be discussed at the West Virginia meeting by Albert H. Hoge, Bluefield, W. Va.

Lake Johnson, Lexington, president of the Kentucky association, will preside at the business session of this group on Wednesday morning. A round table on hospital economies will be presided over by J. Earnest Shouse, Louisville, president-elect of the Kentucky association.

President Stewart will preside at the Ohio meeting on Wednesday morning. The report of the legislative committee, the report of the committee on district organization and a discussion of House Bill No. 80 will be heard.

The three associations will meet jointly again on Wednesday afternoon, with Lake Johnson presiding. C. Rufus Rorem, Julius Rosenwald Fund, Chicago, will speak on group hospitalization. Harry A. Stanley, publicity director, Pennsylvania Hospital Association, will talk on a state program of education.

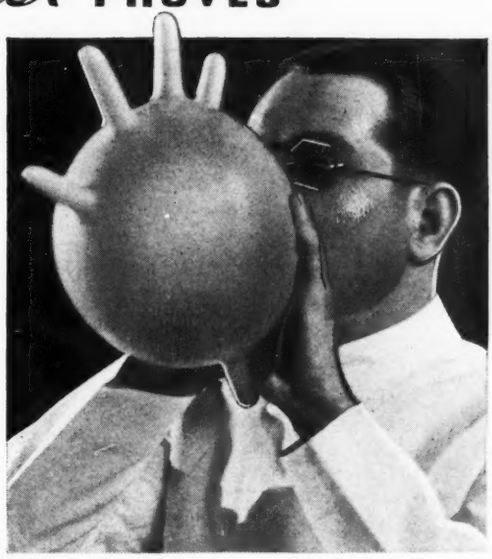
A public education meeting on "The Control of Cancer" will be held at Taft Auditorium on Wednesday evening.

The three hospital associations will meet together on Thursday morning. There will be a general conference in charge of Doctor Oates; a joint round table with the record librarians, in charge of Gertrude Edelman, Cincinnati, president of the Ohio Association of Record Librarians; a joint round table with the dietitians, in charge of Marie Hines, University Hospitals, Cleveland, and also several ten-minute topic discussions.

The individual associations will hold separate luncheon meetings and the closing business sessions will be held on Thursday afternoon.

THE "One-Puff-Test" PROVES MATEX ARE THE MOST Comfortable

Glove comfort is directly dependent on the resilience of the rubber structure. A hard-stretching glove is responsible for glove cramp. A flabby, lifeless glove decreases the tactility of the fingers. The really comfortable glove clings to the hand like a second skin, is the most resilient. And here's a simple, easy way to select comfortable gloves. Grasp the wrist of a glove in your hand. Take a deep breath - NOW - blow one-puff into the glove. Notice how little resistance and how easily the glove expands to ordinary lung pressure. Do this with as many brands or makes as you care to. Then choose the glove that inflates easiest, for that one is the most resilient and therefore the most comfortable - Look for the name on the wrist and you'll unquestionably find the Trademark "Matex Dermatized."



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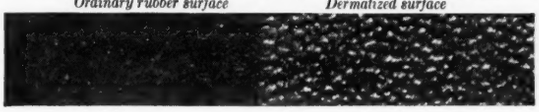
Ordinary rubber surface *Dermatized surface*



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NEWS OF THE MONTH

Nursing Report Reveals Unsatisfactory Educational System in New York State

Nursing education as now conducted is wasteful, costly and inefficient and the product is often unsatisfactory, according to a report made public last month on nursing education in New York State by Harlan Hoyt Horner, assistant commissioner for higher education of the University of the State of New York.

The only basis on which a nursing school should be permitted to exist, according to Doctor Horner, is that it provides fundamentally sound nursing education. The hospital has believed that the maintenance of a training school is a material asset, he declares. "There is abundant reason for questioning the soundness of this belief when all factors are taken into consideration."

The students who drop out before completing the full course give the hospital very expensive service, the report shows. The cost per hour of work done is, on the average in general hospitals, $1.01 for those dropped in the preliminary period, $0.39 for those dropped during the balance of the first year, $0.307 for those dropped during the second year, and $0.29 for those dropped during the third year. Students who stay and complete the course cost, in maintenance and allowance, an average of 28.8 cents per hour of work done, the amount ranging in different hospitals from 19.6 cents to 46.9 cents. These figures, moreover, do not include the cost of instruction.

Quality of Instruction Is Too Low

That this is not a small problem is indicated by the fact that 5,688 of the 15,398 students admitted to 105 schools in New York State from February 1929 to December 1932 dropped out before completing the course. This constitutes 37 per cent of the total. Three-fifths of the eliminations were made during the preliminary period while the cost of training was still high.

With a total in 1933 of 32,403 registered nurses in active service, 8,099 nurse-students enrolled in registered schools, and 36,579 unlicensed and unregistered nurses, New York State is undoubtedly overcrowded with nurses, Doctor Horner declares. The private duty nurses in New York in 1932 had an average income of $478.80 and worked an average of 94.2 days. The quality of instruction is far lower than it should be since approximately 900 or about one-third of the graduates who take the licensing examination each year are unsuccessful.

Five Recommendations Made

Nursing education and nursing service in hospitals should be administratively and financially separated, Doctor Horner says, and hospital authorities should completely abandon the idea that profit may or ought to be made out of a training school.

Doctor Horner makes five recommendations as follows:

1. Admit no new students to nursing school until September, 1936.

2. Amend the education law to prohibit any person offering herself to care for the sick for hire without a license from the state. Recognize the just claims of present practical nurses who can present reasonable evidence of successful experience but close the gates to newcomers not satisfying the educational standards hereafter prescribed.

3. Provide for a new classification of "practical nurses" to combine simple nursing and housekeeping duties. License all persons now engaged in nursing without license who can qualify under this classification and authorize the department to fix the basis of preliminary education and hospital training for this new type. In the future require high school graduation, a fitness and personality test, and an approved course of study, largely practical, of one year in a registered school for practical nurses. Oblige the student to maintain herself and pay tuition and insist that the course be on a strictly educational basis independent of the nursing service in the hospital. Limit the number of students to be admitted annually.

4. Overhaul the training of the registered nurse by insisting on one year of approved college work in a largely prescribed course and, after passing a fitness and personality test, two years of strictly clinical work in a registered school of nursing. Oblige the student to pay for maintenance and tuition in the hospital training school and the hospital to pay for service rendered. Register no training school that subordinates education of nurses to budgetary requirements of the hospital. Definitely limit the number of students admitted annually.

5. Institute a new spirit in nursing education so that it will be professionalized instead of commercialized and the training received will be so good that a graduate nurse can be licensed without examination and her education, if continued, will lead to a B.S. degree in nursing. Limit the number of nursing schools to those finding college affiliations possible and practical and those disposed to deal with nursing education on a strictly professional basis.

Record Librarians in Chicago Elect Officers

The Association of Record Librarians of Chicago and Cook County met recently in Chicago and elected officers for the ensuing year. Mrs. R. C. Hoppe, West Suburban Hospital, Oak Park, Ill., was named president of the association, and Esther Pisano, Children's Memorial Hospital, Chicago, was elected secretary.

$200,000 Given Touro Infirmary for Charity Work

A gift of $200,000 to Touro Infirmary, New Orleans, by Lazare Bloch, retired New Orleans business man, to carry out a wish of his wife, the late Mrs. Augustine Bloch, who died within the past year, was announced recently by Charles Rosen, president of the infirmary.

The purpose of the gift, according to Mr. Rosen, is to reconstruct the public wards, and also to establish a memorial fund, the income from which will enable Touro Infirmary to broaden the scope of its chartiable work.

The gift will make possible a new building, Mr. Rosen said. Dr. B. C. MacLean, superintendent of the institution, stated that plans for the new structure are being prepared by Weiss, Dreyfous and Seiferth, architects.

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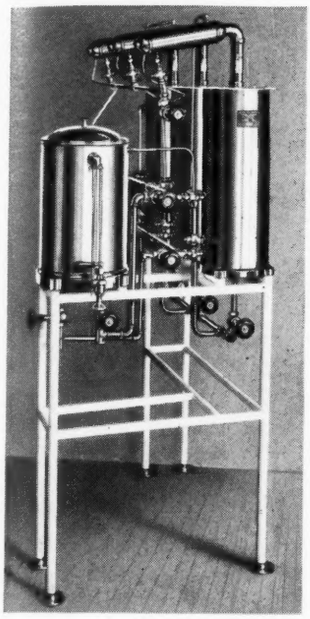

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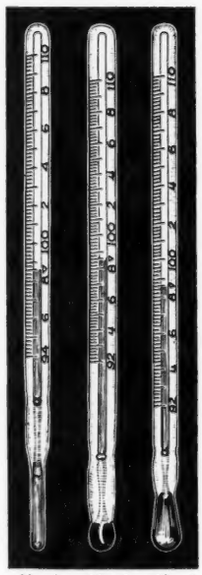

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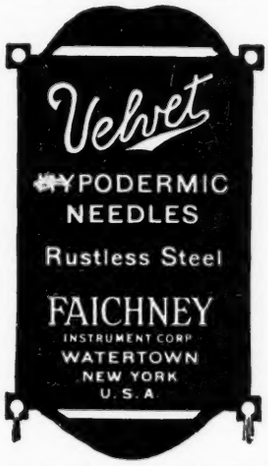

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NEWS OF THE MONTH

Hospital Has $400,000 Supply of Radium

Although the Memorial Hospital, New York City, formerly the New York Cancer Hospital, now has a supply of radium for treating cancer valued at aproximately $400,000, it is insufficient to treat all patients who apply, according to the institution's annual report made public recently. About eight and one-half grams of radium are now in use. The report says that about a third of the hospital service is given free.

Record Librarians in Indiana Form Association

Record librarians of Indiana met recently in Indianapolis to organize a state association to be affiliated with the Association of Record Librarians of North America.

Mabel Ellen Tracy, Methodist Episcopal Hospital, Indianapolis, was elected president of the newly organized state association, and Helen Wagner, Indianapolis City Hospital, Indianapolis, was named secretary-treasurer of the group. Adeline Kennedy, Indiana University School of Medicine and Hospitals, Indianapolis, was elected vice president.

Negro Hospital Drive Goal Is 150 Million

A twenty year campaign to raise $150,000,000 to provide modern hospitalization for Negro patients and adequate training for Negro physicians, nurses and social workers has been started in New York. A board of trustees composed of fourteen Negroes and eleven white leaders is to be appointed to guide the project.

The organization behind the movement is known as the Negro National Hospital Fund, and the amount to be raised will, it is hoped, be contributed at the rate of one cent a week from each of the 12,000,000 Negroes in the United States. The money will be used to establish seventy-five hospitals, one in every city with a population of more than 10,000 Negroes. The first hospital is to be erected in Harlem as soon as sufficient money is raised to begin work.

Coming Meetings

Western Hospital Association.
President, Dr. J. Rollin French, Golden State Hospital, Los Angeles.
Secretary, Lola M. Armstrong, R.N., editor, *Western Hospital Review*, Los Angeles.
Next meeting, Sacramento, Calif., April 9-13.

Hospital Association of Pennsylvania.
President, Jessie J. Turnbull, Elizabeth Steel Magee Hospital, Pittsburgh.
Secretary, Howard E. Bishop, Robert Packer Hospital, Sayre.
Next meeting, Pittsburgh, April 10-12.

Joint Meeting, Ohio, West Virginia and Kentucky Hospital Associations.
Cincinnati, April 17-19.

North Carolina Hospital Association.
President, Newton Fisher, James Walker Memorial Hospital, Wilmington.
Secretary, J. L. Melvin, Rocky Mount.
Next meeting, Charlotte, April 18-20.

American Nurses' Association, National League of Nursing Education and National Organization for Public Health Nursing.
Next meeting, Washington, D. C., April 22-27.

Iowa Hospital Association.
President, Clinton F. Smith, Allen Memorial Hospital, Waterloo.
Secretary, Erwin C. Pohlman, University Hospitals, Iowa City.
Next meeting, Council Bluffs, April 30-May 1.

Joint Meeting, Illinois, Indiana and Wisconsin Hospital Associations.
Chicago, May 2-4.

Joint Meeting, Mississippi, Arkansas, Tennessee and Louisiana Hospital Associations.
Natchez, Miss., May 7.

National Tuberculosis Association.
President, Dr. Alfred Henry, Indianapolis, Ind.
Managing director, Dr. Kendall Emerson, 450 Seventh Avenue, New York City.
Next meeting, Cincinnati, May 14-17.

American Association of Hospital Social Workers.
President, Elizabeth Gardiner, University of Minnesota, Minneapolis.
Executive secretary, Helen Beckley, 18 East Division Street, Chicago.
Next meeting, Kansas City, Mo., May 20-26.

Michigan Hospital Association.
President, Dr. E. T. Olsen, Detroit Receiving Hospital, Detroit.
Secretary, Robert G. Greve, University Hospital, Ann Arbor.
Next meeting, Detroit, May 24-25.

Minnesota Hospital Association.
President, Joseph G. Norby, Fairview Hospital, Minneapolis.
Secretary, A. M. Calvin, Midway and Mounds Park Hospitals, St. Paul.
Next meeting, Rochester, May 24-25.

New York State Hospital Association.
President, Thomas T. Murray, Memorial Hospital, Albany.
Executive secretary, Carl P. Wright, General Hospital, Syracuse.
Next meeting, New York City, May 24-25.

Midwest Hospital Association.
President, Frank J. Walter, St. Luke's Hospital, Denver.
Executive secretary, Walter J. Grolton, City Hospital, St. Louis.
Next meeting, Tulsa, Okla., May 25-26.

Advisory Board for Medical Specialties.
President, Dr. Louis B. Wilson, Rochester, Minn.
Secretary-Treasurer, Dr. Paul Titus, 1015 Highland Building, Pittsburgh, Pa.
Next meeting, Cleveland, June 10.

American Medical Association.
President, Dr. Dean DeWitt Lewis, Johns Hopkins Hospital, Baltimore.
Secretary, Dr. Olin West, 535 North Dearborn Street, Chicago.
Next meeting, Cleveland, June 11-15.

Catholic Hospital Association.
President, Rev. Alphonse M. Schwitalla, St. Louis University, St. Louis, Mo.
Executive secretary, M. R. Kneifl, 1402 South Grand Boulevard, St. Louis.
Next meeting, Cleveland, June 18-22.

Canadian Nurses' Association.
President, Mabel F. Hersey, Royal Victoria Hospital, Montreal.
Executive secretary, Jean S. Wilson, Suite 401, 1411 Crescent Street, Montreal.
Next meeting, Toronto, June 26-30.

American Public Health Association.
President, Dr. Haven Emerson, New York City.
Executive secretary, Dr. Kendall Emerson, 450 Seventh Avenue, New York City.
Next meeting, Pasadena, Calif., Sept. 3-6.

American Protestant Hospital Association.
President, C. S. Pitcher, Philadelphia.
Executive secretary, Dr. Frank C. English, 3233 Griest Avenue, Cincinnati.
Next meeting, Philadelphia, September 21-24.

American College of Hospital Administrators.
Director-General, J. Dewey Lutes, Ravenswood Hospital, Chicago.
Next meeting, Philadelphia, Sept. 22.

American Hospital Association.
President, Dr. Nathaniel W. Faxon, Strong Memorial Hospital, Rochester, N. Y.
Executive secretary, Dr. Bert W. Caldwell, 18 East Division Street, Chicago.
Next meeting, Philadelphia, September 24-28.

American Occupational Therapy Association.
President, Dr. Joseph C. Doane, Jewish Hospital, Philadelphia.
Secretary-Treasurer, Mrs. Eleanor Clarke Slagle, Room 1511, 175 Fifth Avenue, New York City.
Next meeting, Philadelphia, September 24-28.

American College of Surgeons.
President, Dr. Wm. David Haggard, Nashville, Tenn.
Executive secretary, M. T. Farrow, 40 East Erie Street, Chicago.
Next meeting, Boston, October 15.

Ontario Hospital Association.
President, R. Fraser Armstrong, Kingston.
Secretary-Treasurer, Dr. Fred W. Routley, 410 Sherbourne Street, Toronto.
Next meeting, Toronto, October 10-12.

American Dietetic Association.
President, Quindara Oliver Dodge, Simmons College, Boston.
Business manager, Dorothy I. Lenfest, 185 North Wabash Avenue, Chicago.
Next meeting, Washington, D. C., October 14-16.

Kansas Hospital Association.
President, John E. Landers, Wesley Hospital, Wichita.
Secretary, Dr. John T. Axtell, Axtell Christian Hospital, Newton.
Next meeting, Newton, October 27.

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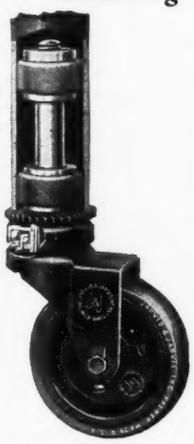

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NEWS OF THE MONTH

Joint Conference of Western Hospital Association Will Consider "New Hospital Era"

An elaborate and carefully worked out program has been prepared for the eighth annual convention of the Western Hospital Association and its conference with allied organizations, which will be held at Sacramento, Calif., April 9 to 13. The conference theme will be "The New Era in Hospital Service."

In addition to the annual convention of the California, Arizona and Nevada Catholic Hospital Association and the three California state nursing associations, practically all allied groups directly associated with hospital service will participate by holding sectional meetings and attending the symposiums and round tables of the general conference sessions. Record librarians, hospital social workers, dietitians, physical therapists, the Public Health League of California and the Public Relations Section of the California Medical Association will take part in the conference.

Nationally known medical, hospital and economic authorities from all parts of the United States have accepted invitations to assist in presenting mutual problems at the convention and to aid in forming conclusions for their successful solution.

Prominent Speakers on the Program

Dr. J. Rollin French, Los Angeles, president of the Western Hospital Association, will preside at the opening general assembly meeting on Monday morning, April 9. This meeting will fire the opening gun of the conference. Solutions will be offered for the many acute problems incidental to the new era and suggestions will be made on perpetuating the voluntary hospital system.

John A. Kingsbury, Milbank Memorial Fund, New York City, will speak on "Designing Adequate Medical and Hospital Service to Meet the Needs of All." Dr. Malcolm T. MacEachern, American College of Surgeons, will discuss "The Necessity of Greater Cooperation Between the Medical Profession, Hospitals and Other Allied Professions." Dr. N. W. Faxon, Rochester, N. Y., president of the American Hospital Association, and Elnora Thomson, president, American Nurses' Association, will respond.

The feature of the Monday afternoon program will be a round table on economic problems of hospitals, conducted by Robert Jolly, Houston, Tex., president-elect, A. H. A. There will be a meeting on Monday evening which will be open to the public.

Dr. B. W. Black, Oakland, Calif., will preside at the general assembly on Tuesday morning. The necessity for changes in hospital systems, and what can and should be done will be the general topic of discussion. A round table on economic problems of hospitals will feature the afternoon program. Insurance, lien laws, purchasing and the hospital formulary are among the subjects listed for discussion. The association banquet will be held Tuesday evening.

Many Special Meetings Planned

General business problems, resolutions and the report of the nominating committee will be heard Wednesday morning, followed by a general assembly on "The Relation of Community Health to the National Recovery Program." Paul Fesler, Chicago, will preside. J. V. Buck, Spokane, will speak on the value of local hospital councils at the Wednesday afternoon session. Compulsory health insurance and periodic payment plans for hospitalization are other topics listed for discussion at the meeting to be held on Wednesday afternoon.

Thursday, the final day of the convention, will be a busy time. Numerous interesting papers and discussions are listed for the morning, and in the afternoon the general session will be conducted by the public health nurses. This will be followed by the report of the tellers and the completion of unfinished business.

The above is only a skeleton outline of the high spots of the general sessions. There will be numerous sectional, breakfast and special meetings and opportunities to inspect the exhibits. Detailed programs have been worked out for the nursing sections, auxiliary section, hospital social workers and record librarians.

Chicago Hospital Group Will Meet on April 4

An all-day meeting to discuss important hospital problems will be held by the Chicago Hospital Association on April 4. Trustees and staff members have been invited to participate. Among the subjects to be discussed are the formation of a hospital council in Chicago, group hospitalization, uniform hospital rates, state and local legislation, desirability of a Community Chest in Chicago, a publicity program, medical economics, nursing education and service, and relations of nongovernmental to governmental hospitals.

General Johnson Modifies Code Ruling

The application of NRA codes to hospitals has again been modified by General Hugh S. Johnson. Last January the nonprofit hospitals petitioned for the right to purchase supplies without regard to code restrictions on prices, credit terms and similar matters. This petition was granted but before it became effective several of the firms selling to hospitals protested that this destroyed the value of their codes and General Johnson ordered a thirty-day stay on the exemption sought by the hospitals.

When the temporary stay expired on March 3 General Johnson allowed the original exemption to go into effect except for those industries in which hospitals are the leading customers. The exception includes the x-ray and electro-medical apparatus industries and "all other industries" which are able to convince General Johnson that a substantial part of their sales are to hospitals and that they need the protection of the codes to prevent price cutting and other difficulties.

The net result is that in purchases of goods, such as coal, of which the sales to hospitals are a small part of total sales, the hospitals can get the benefit of unrestricted competition; however, where the sales to hospitals constitute a large proportion of the total, these sales must be made in observance of the respective code restrictions on competition. This it is said may clarify a situation that has recently been somewhat chaotic.

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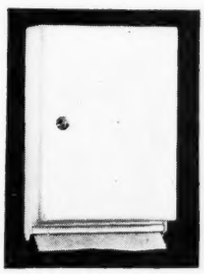

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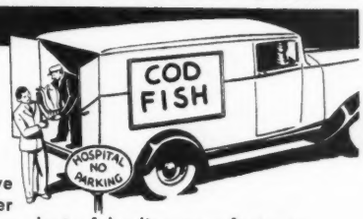

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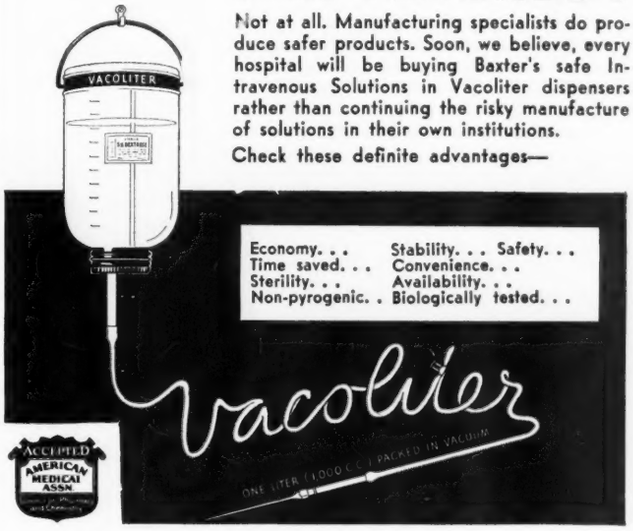
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PERSONALS

JOHN R. HOWARD, JR., has resigned the superintendency of New York Hospital, New York City. MR. HOWARD has devoted the past three years to equipping, organizing and opening the new hospital, operated in association with the Cornell Medical College.

D. L. BRASKAMP has been named superintendent of Alhambra Hospital, Alhambra, Calif., succeeding HELEN C. ANDERSON, who has been in charge of the institution for the past seven years. MR. BRASKAMP has been engaged in hospital administration for a number of years. In 1930 he served as president of the South Dakota State Hospital Association.

DR. ALBERT MISSAL has been appointed superintendent of Santa Maria Hospital, Santa Maria, Calif., to fill the temporary vacancy created by the illness of MAE BELLE BUCK.

CAPT. ARTHUR J. DALTON has been appointed manager of the new Veterans Administration Hospital at Batavia, N. Y. CAPTAIN DALTON has been associated with the administration since 1919, and of late has served as finance supervisor in the Washington, D. C., office.

MRS. JAMES BORTLE, JR., has retired as superintendent of Saratoga Hospital, Saratoga, N. Y., after six years' service in that post. MRS. BORTLE, who is the former MABEL E. HOFFMAN, has been succeeded by CLARA F. SINCLAIR, assistant superintendent for the past six years.

DR. JAMES I. GARRARD was recently appointed superintendent of Milledgeville State Hospital, Milledgeville, Ga. DR. LOVICK P. LONGINO has been named medical director.

PEARL MINTON, superintendent of McKitrick Community Hospital, Kenton, Ohio, since 1927, has resigned because of ill health. CARL FRIDAKER, Kenton business man, has been named business manager of the hospital, and LOIS COLE, who has been associated with the hospital for eighteen months, has been appointed superintendent.

DR. CHARLES L. CLAY has been appointed medical director of Long Island Hospital, Boston. The position of medical director replaces that of superintendent, formerly held by HENRY A. HIGGINS.

CARL P. WRIGHT, JR., who for some years has been associate in administration at Grasslands Hospital, Valhalla, N. Y., has been appointed on the staff of the commissioner of hospitals of New York City to do research work.

HENRY P. WITMAN, superintendent, Hospital of the Holland Union Benevolent Home, Grand Rapids, Mich., died recently.

DR. IRA I. KAPLAN, director of the cancer division of the department of hospitals, New York City, was honored recently with a dinner given by members of the radiation therapy service of Bellevue Hospital, a service he has headed for ten years.

DR. J. M. MCMANUS has been appointed managing officer of Chester State Hospital, Menard, Ill., succeeding DR. FRANK A. STUBBLEFIELD, whose resignation was announced recently. DOCTOR MCMANUS was formerly assistant managing officer at Anna State Hospital, Anna, Ill.

FLORENCE B. THOMAS, directress of nurses, is serving as acting superintendent of Citizens General Hospital, New Kensington, Pa., until a successor is appointed to the late J. H. GRIESEMER.

L. ANNA HUGHES, superintendent of Rahway Memorial Hospital, Rahway, N. J., for the last fifteen years, died on March 16.

ROSA THURMAN, superintendent of Elko General Hospital, Elko, Nev., for the past eleven years, has resigned. Malena Kelley will have charge of the hospital until MISS THURMAN'S successor is named.

HATTIE HYLAND is the new superintendent of Good Samaritan Hospital, Galion, Ohio, succeeding MILDRED SHUMAKER, head of the institution for the past three years.

SMITH HAGAMAN is the new superintendent of North Carolina Baptist Hospital, Winston-Salem, N. C., succeeding the late REV. G. T. LUMPKIN.

Hadassah Seeks Fund for Hospital in Palestine

A model hospital, a school for graduate medical instruction and medical research laboratories are to be combined into the first institution of its kind in Palestine with the construction of the proposed Hadassah-University Hospital in Jerusalem.

Hadassah, the women's Zionist organization of America, and the American Jewish Physicians' Committee are the joint sponsors of this enterprise. Their plans envisage the eventual development of the hospital into a complete medical center such as exists in the large cities of the United States.

The hospital will be administered by Hadassah, while the Hebrew University will direct the academic program of the institution. Cash reserves accumulated for years are to be applied to the building fund, necessitating the raising of only $200,000 at the present time.

New Tumor Clinic Opened

A new tumor clinic has recently been established at Peter Brent Brigham Hospital, Boston. The clinic is held weekly in the out-patient department. All tumor cases entering the hospital are referred to the clinic staff for diagnosis and treatment.

Praises American Hospital Methods

The striking equipment and efficient administration of hospitals in America and the lessons to be learned from them by South Africa were described to a representative of the *Cape Times* by Dr. Lewis S. Robertson, superintendent, Pretoria Hospital, Pretoria, South Africa, on the occasion of his return home from a five-month tour of hospitals in foreign countries.

"The essential features of modern American hospital construction are compactness and the special features for easy nursing, and these deserve every praise," Doctor Robertson said.

T
GOLD CUP • LINO-SAN • FLOOR-SAN • TERRAZZO-SAN • NEO-SHINE • TRUE-TONE • GOLD CUP PINE • NEO-SHINE • TRUE-TONE • LINO-SAN • FLOOR-SAN • GOLD CUP Z
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The CROSS OF HOPE

✚

The year 1665 found disease rampant in England—taking heavy toll in human life. Terror-stricken people locked themselves in disease-ridden homes, all hope in medical aid lost. Fearfully, they nailed to the door a cross, and above it wrote the imploring words, "Lord Have Mercy on Us."

Contrast the pitiful helplessness of the Great Plague with the manner of combating disease today. Science now wages relentless warfare upon dirt and germs with Cleanliness, and its greatest weapons in this fight are Huntington Floor Soaps.

Each Huntington floor cleanser is recommended for a particular type of flooring. Each is safe; each is economical. But what is more important, wherever Huntington soaps are used, dirt cannot exist.

✚

We maintain a special Floor Maintenance Laboratory to help you with your cleaning problems. Tell us the kind of floor you have, and we will tell you how to maintain it, efficiently, economically. Write

HOSPITAL DEPARTMENT

The HUNTINGTON LABORATORIES *Inc.*

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ONE TOWEL IS ENOUGH IF IT'S AN

Evergreen

Because of its double thickness . . . because of its five to six times greater absorption . . . because of its greater wet strength—one Evergreen Double Duty Towel does the work of several ordinary towels.

This is not just a claim . . . *it is a fact* . . . proven in actual service at many washstands. And no better test of a towel's drying efficiency has ever been devised than the washstand test. Anybody can make this test . . . and check its results.

To you who buy towels the Evergreen Double Duty Towel means *real economy—a lower per person cost.* To those who use towels "Evergreen" means a linen-like softness and complete drying.

And remember that boric acid, the safe antiseptic, is used to impregnate the fibres of Evergreen Towels and Toilet Tissues to protect their users. This health safeguard . . . exclusively Evergreen . . . costs *you* no more.

TOWELS AND TOILET TISSUES

Evergreen

USE THIS COUPON, PLEASE

HOBERG PAPER AND FIBRE CO., GREEN BAY, WIS.

Department 20—I should like to make the washroom test. Please send me *without cost or obligation* a trial supply of Evergreen Towels and Toilet Tissues.

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Hospital .....

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Evergreen PROCESSED PAPER IT'S BORATED

THE SURETY OF SAFETY

Avery Slack Photo

Mrs. Barlow

KNOWS 90,000 REASONS WHY

Mrs. Marie S. Barlow has charge of decorating and purchasing for more than 11,000 rooms in the largest hotel chain in the world—the Knott Corporation, New York City. In buying sheets to maintain the supply of 90,000 necessary for their 15,000 beds, she meets the problems that beset every hospital purchasing agent. Listen to her reasons for making Anchor Brand the standard in Knott hotels! She writes:
"The comfort of our guests is our first consideration, and calls for bed linen of a soft, luxurious quality.

Dwight Anchor

SHEETS AND PILLOW CASES

meet our requirements fully. We have tested them in actual use and find that Dwight Anchors not only wear better, but stay soft and new looking longer than any sheets we have ever used."
Use Mrs. Barlow's tested recipe for getting better wearing, more comfortable sheets and cases —specify Anchor Brand in your next order.

NRA WE DO OUR PART

CODE 1

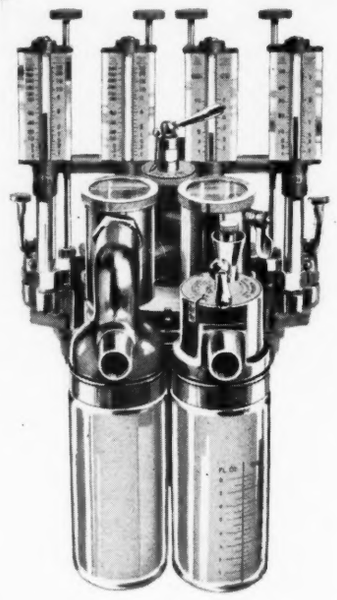
Nashua Mfg. Co.
Incorporated 1823
Box 1206 Boston, Mass.
Indian Head Fabrics · Nashua Blankets

NEWS FROM MANUFACTURERS

NEW TYPE GAS MACHINES ANNOUNCED

The use of dry flow-meters in place of either spring type gauges or water columns for registering the flow of gases to the patient is a feature of the new line of gas machines recently placed on the market by the Heidbrink Company, Minneapolis. Extreme accuracy and simplicity are claimed for the dry flow-meters, due to the fact that the flow of gases is transmitted directly to the registration column without any intervening mechanism.

These machines, which are known as Kinet-O-Meters, are built to meet the requirements of all of the different techniques employed in inhalation anesthesia, and they are especially designed to utilize the economical carbon dioxid absorption technique. The proper employment of this method requires an extremely low flow of the various gases; it places a premium on accurate control.



Operative head of machine.

Each Kinet-O-Meter machine is built in units, a unit consisting of a pressure reducing regulator with a gauge to indicate tank pressure, a dry flow-meter with a valve for regulated control, a lever for emergency volumes and a tubing connecting the pressure reducing regulator and the flow-meter.

Each flow-meter is calibrated in gallons per hour and also in liters per minute, and is finished in conformance with the standardized colors adopted for gas tanks—red for ethylene; blue, nitrous oxid; gray, carbon dioxid; green, oxygen.

Each pressure reducing regulator is properly labeled with the name of the gas with which it is to be used, and the connecting tubings bear colored bands at both ends to correspond with the colors on the flow meters.

The machines are designed to handle three gases or four gases, and they are arranged to accommodate either small or large tanks. The stem that holds the operative head of the machine is telescopic so that the head can be either raised or lowered to accommodate the operating table.

A FLOOR TYPE INFRA-RED LAMP

A new floor type infra-red lamp, announced by the General Electric Co., Schenectady, N. Y., operates at 110-115 volts and supplies infra-red rays from a 250-watt Mazda CX tungsten filament lamp. The lamp, according to tests conducted by the manufacturer, has three times the penetrating depth of carbon filament and carbon heater type lamps. The deeper penetrating power allows short exposure periods, and lessens physical discomfort.

Louder than sirens, headlines shriek of the world's madness. Strikes, lockouts, threats, poverty in the midst of plenty, embezzlement, petty graft. New armies crowd on the heels of armies sacrificed in the war to end war. Embers of race hatred burst into flame. Bread lines and fine furs roil the dregs of class consciousness. Bitterness, greed and misunderstanding ride the tide of calamity.

KNOWING neither race nor creed nor class, untouched by social bickering or religious strife, uninfluenced by political pull or financial power, the hospital still stands as the symbol of sympathy and mercy. It bows to no group, plays no favorites. Human, it makes mistakes, but in an age of materialism, it has not been guilty of the error of sacrificing either its scientific or its humanitarian program on the alter of economic interest or social advancement. It makes no headlines, seeks no notoriety, fosters no propoganda. Its philosophy is to give, its ambition is to serve, its only motive is to heal the sick.

But the hospital cannot pay its bills with ideals or symbolism. Demands for free service are increasing. Income has dropped below the danger line. Only with the active financial support of the public as a whole can the hospital continue its service, maintain its independence. Somehow, this must be done.

A THOUGHT FOR HOSPITAL DAY
We suggest that this advertisement be clipped and pasted on the bulletin board

WILL ROSS, INC., ***Wholesale Hospital Supplies,*** **779-783 N. Water St., Milwaukee, Wis.**

There's Nothing PROBATIONARY About These Colors!

INDIAN HEAD colors passed their probation years ago! That's what makes them so ideal for uniforms for probationers. It's been proved time and time again that they stay clear and bright as long as the uniforms last. And that's a long time—for all Indian Head fabrics are designed for the hardest of hard wear.

INDIAN HEAD CLOTH A NASHUA PRODUCT

You're familiar with the trim, tailored appearance of white Indian Head. Fast Color Indian Head Cloth has the same fuzzless Permanent Finish* that requires no starch to keep it crisply fresh and linen-like.

The better manufacturers furnish colored as well as white uniforms of Indian Head. Look for the Indian Head label!

NRA MEMBER U.S. WE DO OUR PART Code 1

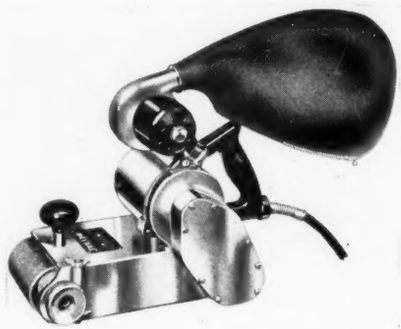
*U. S. Pat. No. 1,439,519

Nashua Mfg. Co.
Incorporated 1823
Box 1206 Boston, Mass.
Anchor Sheets Nashua Blankets

A DUSTLESS SANDING MACHINE

A portable sanding machine equipped with a vacuum dust collector is a new piece of equipment that is applicable to hospital maintenance work. It may be used for resurfacing woodwork, floors, furniture and benches, and to grind and polish stone or metal.

The Skilsaw Sander, made by Skilsaw, Inc., 3310 Elston Avenue, Chicago, eliminates sanding dust from the air and permits cleaning and painting to be performed at the same time as sanding. It prevents patients and doctors from being disturbed by dust laden air during the sanding process. The dust collector consists of a high speed vacuum fan mounted on the sander, with the intake opening immediately behind the sanding belt. The collected dust particles are deposited in a removable zipper bag. The individual motor on the dust collector prevents any slowing down of the sanding motor, thereby maintaining sanding efficiency. The new dust collector unit can be attached to old sanding machines.



Dust is collected in the removable zipper bag attached to the sanding machine, which eliminates sanding dust from the air.

The Skilsaw Sander used with the dust collector has an aluminum die cast frame, and a ⅝ h. p., universal A.C. or D.C., 25-60-cycle motor. The belt size is 4½ inches wide by 25 13/16 inches long, which presents a sanding surface of 32 square inches. The belt has a speed of 1,900 feet a minute and is under a constant tension maintained by coil springs. The belt can be removed by turning a hand wheel which releases the spring tension. The sanding belt runs flush with the right side of the machine for working close to upright objects parallel to the belt, and a noser attachment allows the same close work when uprights are parallel to the roller. The manufacturer announces that this machine leaves no ripples or ridges on the finished surface.

A NEW LOCKING PRINCIPLE

A new development in key lock design for all types of locks and padlocks has been achieved by the Dudley Lock Corporation, 26 North Franklin Street, Chicago. Greater security is claimed for this type of lock because the keys are duplicable only by the manufacturer.

The Dualock is an advanced pin tumbler principle of exclusive design, and a key made on a special machine is required for its operation. In this new lock each cylinder is made to precision limits and must pass a rigid test. The pin tumblers have sharp, square corners on the same radius as the periphery of the cylinder. In order to free these pins from the grooves they must be correctly gathered within the periphery of the cylinder. Should one pin tumbler be pulled down too far it will protrude on the opposite side and the cylinder will remain locked in the housing.

The key has a long, wavy groove and the shank is shaved to dimensions. The groove conforms to these shaved edges; at intervals it is high, pulling the pin up, then it is low, pushing the pin down. When the key has been inserted all the way, all the pins have either been pushed or pulled

THIS PRACTICAL COMBINATION BOWL BY.....

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FOR SERVING SOUPS, FRUIT COCKTAIL, ORANGE JUICE, HALF GRAPE FRUIT, ETC.

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J. Sklar Mfg. Co.
133 Floyd Street
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Please send us Free Illustrated Catalog of American-made Stainless Steel Instruments.

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Hospital .....
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MH-4-34

Write for This Free Catalog

This Catalog illustrates the new line of stainless steel surgical instruments made in the American factory of the J. Sklar Mfg. Co. These instruments are all made of the finest stainless steel adaptable for surgical instruments.

They may be had with either the old riveted box lock or the new Ralks' patented box lock.

At all ethical hospital supply houses, reasonably priced.

Write for the catalog NOW!

J. SKLAR MFG. CO.
Wholesale Exclusively
133 FLOYD STREET, BROOKLYN, N. Y.

The new RALKS' Adjustable Box Lock combines the advantages of the old style box lock which holds the jaws of the forceps in proper alignment, and at the same time, it has the features of the screw lock which permits the adjustment of lock tension, when necessary.

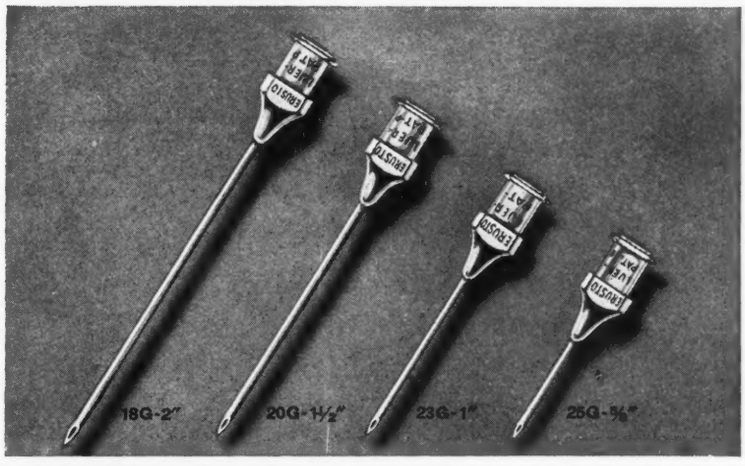
SKLAR PRODUCT

NEW
American - Made
STAINLESS STEEL SURGICAL INSTRUMENTS

Featuring the EXCLUSIVE RALKS' Patented BOX LOCK

B-D ERUSTO NEEDLES

The standard rustless needle with the strong sharp point of new design. A point which penetrates with minimum discomfort, dilating the skin and reducing seepage.



FIRTH-BREARLEY STAINLESS STEEL

B-D PRODUCTS
Made for the Profession

BECTON, DICKINSON & CO., RUTHERFORD, N. J.

ALL PURPOSE

Lotuscloth

RUBBERIZED FABRICS, INC.

new rubberized fabric—

IN BOLTS—for all hospital uses

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A New Achievement in Fabrics—Soft, smooth, light in weight yet so strong it lasts through years of wear, Lotuscloth is the ONE material of many hospital uses. It is thoroughly impregnated with pure Latex and cured without the use of chemicals. It is unharmed by the ordinary fluids met with in hospital use. Never becomes hard or brittle and does not crack. Actually improves with use.

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Used by Hospitals The Country Over—Hospitals are finding the long life of Lotuscloth a money-saving feature. A guaranteed shelf life of 5 years assures freedom from waste. Lotuscloth sews easily into

Sheets, Pillow Cases	Mattress Covers
Operating Table Pad Covers	Crib Covers
	Draw Sheets

The silvery lustre of Lotuscloth adapts it beautifully to use in making hospital and laboratory garments as well. Special prices will be quoted on ready-made garments for Nurses, Doctors, Patients.

●

Samples of Lotuscloth will be sent on request

PRICES: No. 3A, Light, per yard.....**$1.50**
No. 6, Heavy, per yard.....**$1.75**

(Discount on quantity purchases of 25-30 yards or more)

SHARP & SMITH
65 E. Lake St. Chicago, Ill.

into place by the various heights and depths of the grooves. The keys are cut on a misaligned sequence so that it is practically impossible to figure a code. Master key convenience is added without reducing the security of the lock. This is accomplished through two separate and distinct sets of pin tumblers. There is one set of pin tumblers for change keys, and another set for master keys.

The master key type of lock is particularly desirable for institutional use, and one master key may be obtained for all locks in the building so that the superintendent may have complete control. The locks may also be master-keyed in various groups.

LOWER COST RUBBER TILE FLOORING

In order to meet the demand for rubber tile flooring at prices in keeping with present day hospital budgets, the Stedman Rubber Flooring Company, South Braintree, Mass., has developed a line of reenforced rubber tile flooring of ⅛-inch thickness.

Previous to this, the company's line of rubber floors have been available only in 5/32-inch and ¼-inch thicknesses. The ⅛-inch flooring is made from the same formula and has the same characteristics as the company's heavier grades of flooring, and it is available in the same wide range of colors, but at a decided saving in cost. The manufacturer states that the material is installed easily and inexpensively over wood or concrete subfloors.

NEW TRADE CATALOGUES AND PAMPHLETS

Keever Starch Co.—The "Hospital Laundry" is the name of a booklet issued every month by the Keever Starch Co., Columbus, Ohio. A wide variety of laundering problems is covered in articles contributed by hospital laundrymen and others in this field, and a "Query Page," wherein questions on laundering are answered, acquaints one further with methods employed in hospital laundries.

F. C. Huyck & Sons (Kenwood Mills)—Suggestions on "What to do" and "What not to do" in laundering all wool blankets and presented on a card to hang up in the hospital laundry, are offered by F. C. Huyck & Sons (Kenwood Mills), Albany, N. Y. This card also announces that requests for specific information may be sent directly to the technical division of Kenwood Research Laboratories.

General Electric X-Ray Corporation—An attractive and interesting publication, Bulletin No. 293, is being distributed by General Electric X-Ray Corporation, 2012 Jackson Boulevard, Chicago. The bulletin contains complete data on the entire line of Coolidge X-Ray Tubes, which is said to be the most complete line ever offered in the history of the corporation.

Physician's Record Co.—A new case history storage file is described and illustrated in a folder issued by the Physicians' Record Co., 161 West Harrison Street, Chicago. The file consists of stout boxes designed to store patients' charts economically and in such a way that they are readily accessible for reference.

Jenkins Bros.—An excellent source of information on valves and valve layout is the new Catalogue No. 23, published by Jenkins Bros., 80 White Street, New York City. The catalogue describes in detail the design and construction of 400 Jenkins valves. Services, pressures, temperatures and fluids for which the valves are recommended are stated. The last section contains many pages of engineering data that are needed where valves are used.